



# The Social Media Presence of Professional Sports Team Physicians Is High Among Major League Soccer, Major League Lacrosse, Major League Rugby, Winter Olympics, and Women's National Basketball Association, But Highest Among MLS Team Physicians

Sayyida S. Hasan, B.S., Hashim Shaikh, B.S., Keshin Visahan, B.S., Sergio Navarro, M.D., Irvin Sulapas, M.D., and Theodore Shybut, M.D.

**Purpose:** To quantify the social media utilization of professional sports team physicians on popular platforms and analyze differences between physician users and physician non-users for smaller major professional sports: Major League Soccer (MLS), Major League Lacrosse (MLL), Major League Rugby (MLR), Winter Olympics (WO) and Women's National Basketball Association (WNBA). **Methods:** Physicians for the MLS, MLL, MLR, WO, and WNBA were identified and characterized based on training background, practice setting, years of experience, and geographic location. Social media presence on Facebook, Twitter, LinkedIn, Instagram, and ResearchGate were determined. Differences between social media users and non-users were analyzed via chi-squared tests for nonparametric variables. Secondary analysis consisted of univariate logistic regression to identify associated factors. **Results:** 86 team physicians were identified. 73.3% of physicians had at least one social media profile. 80.2% of physicians were orthopedic surgeons. Specifically, 22.1% had a professional Facebook page, 24.4% had a professional Twitter page, 58.1% had a LinkedIn profile, 25.6% a ResearchGate profile, and 9.3% an Instagram account. All physicians with a social media presence were fellowship-trained. **Conclusions:** Seventy-three percent of team physicians in the MLS, MLL, MLR, WO, or WNBA have social media presence, with over half using LinkedIn. Fellowship-trained physicians were significantly more likely to use social media, and 100% of physicians with social media presence were fellowship trained. MLS and WO team physicians were significantly more likely to use LinkedIn ( $P = .02$ ). MLS team physicians were significantly more likely to use social media overall ( $P = .004$ ). No other metric significantly impacted social media presence. **Clinical Relevance:** The influence of social media is vast. It is important to explore the extent that sports team physicians utilize social media and how this use may influence patient care.

## Introduction

The advent of the Internet has revolutionized the ability of patients to interact with the healthcare system. Patients frequently use social media to seek information and connect with peers, especially over discussion boards and online support groups, drawn together by common objectives.<sup>1-3</sup> Approximately 42% of all patients utilize social media for healthcare information, with increasing use in patients between the ages of 18 and 24 years.<sup>4</sup> Thus, the Internet can impact patient perception and behavior toward their care, ultimately affecting outcomes.

The COVID-19 pandemic has demonstrated how crucial global communication is to the healthcare field. Social media platforms such as Instagram, Twitter, and

From Northwell Health, New Hyde Park, New York, U.S.A. (S.S.H., K.V); University of Rochester, Rochester, New York, U.S.A. (H.S.); University of Minnesota, Minneapolis, Minnesota, U.S.A. (S.N.); and Baylor College of Medicine, Houston, Texas, U.S.A. (T.S., I.S).

The authors report the following potential conflicts of interest or sources of funding: I.S. and T.S. served as Head Team Physicians for the Houston SaberCats of Major League Rugby from 2017-2022.

Received July 27, 2022; accepted October 4, 2022.

Address correspondence to Sayyida Hasan, B.S., Department of Pediatric Orthopaedics, Cohen Children's Medical Center, 7 Vermont Dr., New Hyde Park, NY 11042 U.S.A. E-mail: [shasan7@northwell.edu](mailto:shasan7@northwell.edu)

© 2022 THE AUTHORS. Published by Elsevier Inc. on behalf of the Arthroscopy Association of North America. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>). 2666-061X/22947

<https://doi.org/10.1016/j.asmr.2022.10.008>

Facebook allow physicians to share, research, and review novel findings in real-time, as was seen with COVID-19 guidelines.<sup>5</sup> Additionally, pandemic restrictions and hospital policies required physicians to adopt alternative methods to access patients and colleagues, furthering the proliferation and utilization of social media platforms for personal and professional use.<sup>6,7</sup>

Physicians are increasingly using and present on social media.<sup>7,8</sup> In a 2010 study, 43% of health-related blogs were written by physicians.<sup>9</sup> A more recent survey showed that nearly 65% of all physicians engage with social media for professional purposes.<sup>10</sup> However, rates of professional social media presence vary between specialties. For instance, Cho et al. found about 81% of plastic surgeons use social media.<sup>11</sup> In a separate study, Haeberle et al. found that among pediatric spine surgeons, 55% had a LinkedIn profile, and 33% had a Twitter account.<sup>12</sup>

Professional sports team physicians constitute a unique subset of physicians in that they are affiliated with prominent organizations, which command prominent media presences and large global audiences. A recent study conducted by LaGrant et al. found that nearly 66% of professional team doctors had some social media presence.<sup>13</sup> However, the study was limited to major sports leagues exclusively. The purposes of this study were to quantify the social media utilization of professional sports team physicians on popular platforms and analyze differences between physician users and physician non-users for smaller major professional sports: Major League Soccer (MLS), Major League Lacrosse (MLL), Major League Rugby (MLR), Winter Olympics (WO) and Women's National Basketball Association (WNBA). We hypothesized that most sports team physicians would have a social media presence, with no significant difference in social media use between leagues studied and that private practice physicians would have a larger presence on social media when compared to their colleagues in academic institutions.

## Methods

Institutional Review Board consideration was not required, as all data were publicly available. Smaller Sports Leagues were determined based on the net worth of the Leagues, with smaller leagues worth <\$1 billion. Among these leagues are the MLS, MLL, MLR, WO, and the WNBA. Physicians were identified from published lists of team physicians.<sup>14-18</sup> Users were physicians that had a social media account and used these platforms (at least one post), while nonusers included physicians without a social media account or those that did not post on their platforms. Secondary analyses focused on factors affecting rates of social media utilization, as well as a comparison of peer-facing platforms, LinkedIn and ResearchGate, with more

patient-facing platforms, including Instagram, Twitter, and Facebook. Direct communication was made with physicians in the MLR, MLL, and WNBA, while governing bodies were contacted for the MLS and WO to inquire about any league-wide official social media policy. Per our findings, none of the aforementioned leagues has explicit policies mandating or encouraging physicians to maintain presence on any social media platform.

Of those that were identified, individual information was gathered by evaluating Google searches and social media presence. Facebook, Twitter, LinkedIn, ResearchGate, and Instagram were chosen as social media platforms of interest based on previous studies.<sup>13,19</sup> Physicians were searched on Google using full names with and without title (e.g., MD/DO) in the search bar. We used individual physician search results and the information given on the affiliated team's website (if available) to cross-reference team physician information from the published lists. A second investigator reviewed all results to resolve any conflicting information. Physicians were excluded from analysis if they were retired or deceased, or if reliable demographic details could not be found.

Demographic variables included academic (versus private) practice, hospital status, medical school status, orthopedic surgery training (versus nonorthopedic surgery), fellowship (versus no fellowship), location, and professional sports league affiliation. Both current geographic location (West, South, Northeast, Midwest, Northwest, East, Southwest, or International) and metropolitan status were used for location. Large metropolitan locations were classified as cities with populations >1.5 million people. Medical school status was based on the 2019 U.S. News and World Report medical school research rankings.<sup>20</sup> For those in academic practice, "Top 25" affiliate status were given to those recognized by the 2019-2020 U.S. News and World Report ranking of Orthopedic Hospitals.<sup>21</sup> Years of experience were recorded based on search findings, with senior physicians considered those that had 15 or more years of experience.

## Statistical Considerations

For the primary analysis, chi-square analyses were conducted to determine statistical differences between demographic variables. For secondary analysis, univariate logistic regression was conducted to determine the probability of having a social media presence based on previously mentioned demographics. Data were analyzed using SPSS 2316, R software environment (version 3.5.1)<sup>17</sup>, and packages "survey"<sup>18</sup>, which calculates means, totals, ratios, quantiles, contingency tables, regression models, loglinear models, survival curves, rank tests, for the whole sample and for domains. We also used "usdm"<sup>19</sup>, which provides

**Table 1.** Team Sports Physicians in each League by Specialty, Training Background, Training Location, and Current Practice

	MLS (n = 32)	MLL (n = 17)	WNBA (n = 23)	MLR (n = 2)	WO (n = 12)	Totals (n = 86)	P
<i>Specialty</i>							
Emergency Medicine	1 (3.13%)	0	0	0	0	1 (1.16%)	n/a*
Family medicine	5 (15.63%)	2 (11.8%)	0	0	1 (8.33%)	8 (9.30%)	n/a*
Internal medicine	1 (3.13%)	1 (5.88%)	0	0	0	2 (2.34%)	n/a*
Pediatrics	1 (3.13%)	0	0	0	0	1 (1.16%)	n/a*
Orthopaedic surgery	22 (25.58%)	13 (76.47%)	23 (100%)	2 (100.0%)	9 (75.0%)	69 (80.23%)	n/a*
PM&R	2 (6.26%)	1 (5.88%)	0	0	2 (16.67%)	5 (5.81%)	n/a*
<i>Training Background</i>							
MD	32 (100.0%)	17 (100.0%)	23 (100.0%)	1 (50.0%)	11 (91.66%)	84 (97.67%)	n/a*
DO	0	0	0	1 (50.0%)	1 (8.33%)	2 (2.33%)	n/a*
<i>Training Location</i>							
Top 25 school	9 (28.13%)	5 (29.41%)	8 (34.78%)	1 (50.0%)	5 (41.66%)	28 (32.56%)	.89
<i>Current Practice</i>							
Academic	12 (37.5%)	4 (23.53%)	9 (39.13%)	1 (50.0%)	2 (16.66%)	28 (32.56%)	.54
Private	20 (62.5%)	13 (76.47%)	14 (60.87%)	1 (50.0%)	10 (83.33%)	58 (67.44%)	

P = .05 considered statistically significant.

PM&R, Physical Medicine & Rehabilitation.

\*P values cannot be calculated due to sample distribution.

methods and tools for assessing the impact of different sources of uncertainties or error. An alpha level of 0.05 was used for all statistical analyses.

## Results

Eighty-six professional team physicians were identified across 5 different sports leagues. Team physicians had a median 20.5 (14-26 years) years of post-training experience, defined as years of experience following the final year of fellowship or residency. 84 (97.7%) physicians were trained as medical doctors (M.D.). 69 (80.2%) trained as orthopedic surgeons. 67 (97.1%) orthopedic surgeons received fellowship training, compared to 100% of nonorthopedic surgeons. The majority (95.5%) of orthopedic surgeons who had fellowship training, completed one in sports medicine. 28 (32.6%) of all physicians received their degree from a top 25 medical school as designated by the 2019 U.S. News and World Report.<sup>20</sup> Team sports physicians were distributed throughout the United States, with most U.S.-based physicians in the Northeast and West (31.4% and 37.2%; n = 27 and 32). The Southwest, Northwest, Southeast, East, and South were the least represented (0%, 0%, 2.3%, 8.1%, 8.1%; n = 0, 0, 2, 7, 7). Of note, all team physicians in the WNBA and MLR underwent orthopedic surgery residency. **Table 1** depicts a summary of team physicians by sports league, training background, and current practice.

### Social Media Presence

Sixty-three (73.3%) team physicians were users. More specifically, 22.1% had a professional Facebook page, 24.4% had a professional Twitter page, 58.1% had a LinkedIn profile, 25.6% had a ResearchGate profile, and 9.3% had an Instagram account. 75% of both MLS and WO team physicians had LinkedIn

profiles, which was significantly higher than the MLL (29.4%), WNBA (47.8%), and MLR (50.0%) team physicians ( $P = .02$ ). MLS physicians were also significantly more likely to be users overall (90.6%), while MLL physicians were significantly less likely to utilize social media (41.2%) ( $P = .004$ ). **Table 2** depicts professional team physicians with any social media presence by type of social media and sports league.

Of the users, the majority (73.0%) were senior attending physicians, who had more than 15 years of experience, which was not significantly different from nonusers (69.6%) ( $P = .75$ ). 20 (31.8%) of users work in academic institutions, while 7 (11.1%) work at the Top 25 accredited orthopedic hospitals. This was similar to nonusers, of whom 8 (34.8%) work in academic institutions and 4 (17.4%) work at Top 25 orthopedic hospitals ( $P > .05$ ). The distribution of physicians that were located in large metropolitan areas was similar ( $P = .09$ ).

As for medical school training in the study group, 23 (36.5%) physician users attended Top 25 medical schools, and 53 (84.1%) underwent orthopedic surgery residency, which was similar to the 5 (21.7%) nonusers that attended Top 25 institutions, and the 16 (69.6%) nonusers that underwent an orthopedic residency ( $P > .05$ ). All physician users received fellowship training, compared to 21 (91.3%) of physician non users. **Table 3** depicts the comparison of demographics between physician users and nonusers.

### Predictors of Social Media Presence

Logistic regression analysis on the probability of having a social media presence found that fellowship-trained team physicians had significantly higher odds (odds ratio = 14.77;  $P = .02$ ) of using social media than non-fellowship trained physicians. In comparison,

**Table 2.** Percentage of Team Physicians in Each Sports League With Social Media Presence, by Type of Social Media

	MLS <i>n</i> = 32	MLL <i>n</i> = 17	WNBA <i>n</i> = 23	MLR <i>n</i> = 2	WO <i>n</i> = 12	Total <i>n</i> = 86	<i>P</i>
Facebook	11 (34.4%)	2 (11.8%)	2 (8.7%)	0	4 (33.3%)	19 (22.1%)	n/a*
Twitter	9 (28.1%)	0	7 (30.4%)	1 (50.0%)	4 (33.3%)	21 (24.4%)	n/a*
LinkedIn	<b>24 (75.0%)</b>	5 (29.4%)	11 (47.8%)	1 (50.0%)	<b>9 (75.0%)</b>	50 (58.1%)	<b>.02</b>
ResearchGate	7 (21.9%)	4 (23.5%)	10 (13.0%)	0	1 (8.3%)	22 (25.6%)	n/a*
Instagram	4 (12.5%)	0	3 (13.0%)	0	1 (8.3%)	8 (9.3%)	n/a*
Overall	<b>29 (90.6%)</b>	7 (41.2%)	16 (69.6%)	1 (50.0%)	10 (83.3%)	63 (73.3%)	<b>.004</b>

“Overall” indicates the percentage of physicians with presence on at least one of the five social media platforms studied. *P* = .05 considered statistically significant; bolded values indicate significant difference.

\**P* values cannot be calculated due to sample distribution.

there was no difference in social media usage between physicians that attended a Top-25 ranked medical school (OR: 2.1; *P* = .19), practice at an academic institution (OR: 0.9; *P* = .79), Top 25 ranked orthopaedic hospital (OR: 0.6; *P* = .45), senior attending status (OR: 1.2; *P* = .75), or that were trained as orthopaedic surgeons (OR: 2.3; *P* = .15).

MLS (odds ratio = 5.7; *P* = .003) sports team physicians were significantly more likely to have at least one social media presence, whereas MLL (odds ratio = 0.2; *P* = .002) sports team physicians were significantly less likely to have at least one social media presence. Table 4 contains the univariate logistic regression analysis results for indicators of social media use.

### Discussion

This study showed the presence of social media use among team physicians for American professional sports teams is 73.3% across the 5 leagues measured. Among social media platforms, LinkedIn was the most commonly used at 58.1%, followed by ResearchGate at

25.6%, Twitter at 24.4%, and professional Facebook at 22.1%. Professional Instagram presence was only 9.3%. In contrast to previous studies, this study showed a significant correlation between sports league affiliation and social media usage. MLS physicians were significantly more likely to be social media users overall (90.6%; *P* = .004) and significantly more likely to use LinkedIn (75.0%; *P* = .02). We also found that fellowship training was associated with social media utilization among team physicians. However, other factors such as training background, practice setting, senior attending status, and geographic location were unrelated to social media presence.

The results of our study support the hypothesis that almost three-fourths of sports team physicians have a professional social media presence, exceeding the 37% usage rates found for shoulder and elbow orthopaedic surgeons by McCormick et al. in 2021 and 50.4% for plastic surgeons by Vardanian et al. in 2013.<sup>22,23</sup> The higher rates of social media presence in our study suggest there may be an association between affiliation with professional sports teams, such as the MLS, MLL, MLR, WO, and WNBA and increased rates of physician social media utilization.

A previous study by LaGrant et al. analyzed the use of social media usage by professional sports physicians in the National Football League (NFL), Major League Baseball (MLB), National Hockey League (NHL), and National Basketball Association (NBA). However, they did not include other professional sports with lower net worths.<sup>13</sup> The present study shows that social media usage by professional sports physicians in MLS, MLL, MLR, WO, and WNBA (73.3%) is higher than was reported for professional sports physicians in larger leagues (65.3%).<sup>13</sup> The most used social media platform in both the larger and smaller professional leagues was LinkedIn. This similarity could be due to the fact that regardless of the size of the league, social media provides sports team physicians a convenient platform to connect and communicate for professional purposes. The high social media presence of sports team physicians in smaller leagues appears to be driven by the 90.6% of

**Table 3.** Comparison of Sports Team Physicians With and Without Social Media Presence

	Social Media Presence ( <i>n</i> = 63)	No Social Media Presence ( <i>n</i> = 23)	<i>P</i>
<i>Current Practice</i>			
Top 25 Orthopaedic Hospital	7 (11.1%)	4 (17.4%)	.44
Senior attending physician	46 (73.0%)	16 (69.6%)	.75
Academic institution	20 (31.8%)	8 (34.8%)	.79
Large metropolitan location	23 (36.5%)	4 (17.4%)	.09
<i>Training</i>			
Top 25 medical school	23 (36.5%)	5 (21.7%)	.19
Orthopaedic surgery training	53 (84.1%)	16 (69.6%)	.13
Fellowship	63 (100.0%)	21 (91.3%)	n/a*

*P* < 0.05 is considered statistically significant. CI, confidence interval; ref, reference value.

\*Analysis cannot be conducted due to sample distribution



**Table 4.** Univariate Logistic Regression Table on Social Media Presence

	Odds Ratio [95% CI*]	<i>P</i>
<i>Current Practice</i>		
Top 25 Orthopaedic Hospital	0.6 [0.2, 2.3]	.45
Senior attending physician	1.2 [0.4, 3.4]	.75
Academic institution	0.9 [0.3, 2.4]	.79
Large metropolitan location	2.7 [0.9, 9.0]	.08
<i>Training Background</i>		
Top 25 medical school	2.1 [0.7, 6.3]	.19
Orthopaedic surgery training	2.3 [0.8, 7.1]	.15
Fellowship <sup>†</sup>	14.77 [0.68, 319.87]	.02
<i>Sports League</i>		
MLS vs. other	5.7 [1.5, 21.1]	<b>.009</b>

*P* = 0.05 is considered statistically significant; bold value indicates significant difference.

\*CI = confidence interval; ref = reference value.

<sup>†</sup>Odds ratio with 0.5 added to each section to avoid “undefined” error.

MLS physicians, who constituted 37.2% of the users in this study. A meta-analysis by Moorhead et al. found that social media usage provided benefits to health communication among physicians, including the ability to increase interactions with one another, and greater social and professional support.<sup>24</sup>

The affinity for LinkedIn profiles among team physicians suggests that intra-physician engagement may be a commonly desired goal for this cohort. Many prominent medical journals and orthopedic and sports medicine societies maintain active LinkedIn accounts. Commonly, these journals and societies use LinkedIn to share research and news about the journal or society that dovetails with their Twitter, Instagram, and Facebook pages. Enhancing public visibility and peer networking may possibly explain heightened LinkedIn presence among sports medicine physicians involved with these relatively smaller major leagues. Considering the less prominent public profile of the MLS in comparison to larger leagues, such as the NFL, NBA, NHL, and MLB, use of social media platforms may be more essential to team physician networking with peers. Knowledge created and shared with colleagues and medical communities allows physicians to support their professional interests by building like-minded communities, thus facilitating exchange of ideas through a convenient platform.

LinkedIn, in particular, allows multimedia embedding, tagging and searching, sharing, and discovery via common search engines (i.e., Google) that are accessible without specific apps or plug-ins. LinkedIn also allows physicians the ability to develop a personal brand, which they can publicize to maintain peer visibility and promote and engage their specific interests. Physicians can direct traffic to their accolades, their interests—especially clinical and scholarly interests, and

expand their viewership through media engagement and blog posts, while still maintaining engagement with their audience and expanding their network. As their online presence grows, physicians have the potential to become powerful influencers of opinion, driving funding for research, education, and policies supported by scientific evidence and other like-minded peers. While ResearchGate allows physicians to share their research and collaborate with other physician scholars in a professional setting, the platform primarily focuses on scientific output and does not encompass all elements of professional networking that LinkedIn can facilitate. By contrast, Twitter, Facebook, and Instagram are primarily public facing platforms and geared towards sharing real-time narratives, social sharing, and entertainment. These platforms convey information about a person’s personality, values, and priorities, based on users’ photos, posts, comments, friends, followings, and liked or shared content. The impressions generated by this content can be lasting. Thus, although these outlets also offer channels to communicate with patients directly, physician-users may feel less inclined to do so to maintain separate personal and professional images.

Unlike previous studies, this study found that there was no significant difference in years of post-training experience between users and nonusers (*P* = .75). This finding was unexpected, as prior studies have found younger healthcare professionals more willing to adopt a social media presence than their more senior colleagues.<sup>1,25-26</sup> This further suggests the concept that the role of professional team physician or factors associated with the professional team physician role encourage social media usage. A previous literature review of social media usage among healthcare professionals by Rolls et al. found that healthcare professionals use social media to develop virtual communities to facilitate knowledge sharing, and increased accessibility to evidence-based research.<sup>27</sup> Specifically, social media use was found to be impacted by a user’s positive attitude toward the media, which, in turn, is reinforced by credible peers. Thus, as experienced surgeons continue to develop their professional network, increasing seniority may encourage social media participation rather than limit its use.

Fellowship training was a significant predictor of social media presence among professional team physicians. All users also underwent fellowship, with fellowship-trained physicians 14.8 times more likely to have a social media presence (*P* = .02). This is similar to a previous study by LaGrant et al., which found that fellowship training predicted social media usage.<sup>13</sup> A potential explanation for the increased usage of social media among fellowship graduates is that sports medicine subspecialty physicians are likely looking to engage with younger patient populations, commonly seen in sports medicine clinics,

who may be more likely to utilize social media as a tool for selecting physicians. A previous study by Finch and Kenihan found that the median age of a patient in a sports medicine clinic was 25.4 years old, compared to the median age of 72 for all hospital admitted patients found by Raveh et al.<sup>28,29</sup> The American Medical Association found that ~80% of Internet users have reportedly searched for physicians, treatments, or medical issues, resulting in 6.5 million healthcare-related search queries per day, with younger individuals more likely to utilize social media.<sup>30,31</sup> In our study 96.4% of fellowship-trained team physicians completed sports medicine fellowships, making professional social media utilization with the purpose of connecting with the younger potential patient population aligns with this possibility. Additionally, McLawhorn et al. found that social media allows surgeons to deliver patient-centered care, improve communication with patients, and lead to an increase in new patients.<sup>32</sup> Thus, sports medicine surgeons may be further incentivized to participate in professional social media. Future studies on patient preferences might help align physician social media utilization with patient preferences or perceived needs. Similarly, frequency of social media utilization was not analyzed in this study. Assessing sports medicine and/or orthopedic surgeon activity and engagement on social media may be a subject for future investigation(s).

80.2% of sports team physicians included in this study had training in orthopedic surgery, which is higher than the 64% of team physicians who were orthopedic surgeons across high school, college, and professional levels of sports.<sup>33</sup> However, this discrepancy is likely explained by the lower proportion of orthopedic surgeons found in collegiate sports (36%) and high school sports (20%), as reported by Makhni et al.<sup>33</sup> Of all physicians in our study, 97.7% were M.D.-trained and 2.3% were D.O. physicians. These findings may indicate that sports team physicians are more likely to be M.D. graduates, but statistical significance was unable to be calculated due to sample distribution. There were no differences between leagues or social media presence for physicians that trained at top 25 medical schools or worked at top 25 orthopedic hospitals. The results of our study also found that there was no difference between private and academic practice among users, which is consistent with the professional team physician study by LaGrant et al. but contrasts with previous studies in the general physician population.<sup>7,11-13,19,22,23</sup> This finding could also be attributed to the idea that team physicians are more likely to utilize social media on the basis of their role as a sports team physician, regardless of whether the physician's primary practice role is within academic or private practice.

## Limitations

There are a number of limitations in our study. This analysis did not measure changes in social media usage over time. Because of this, social media use in previous years, as well as trends over time in social media usage for sports team physicians, are outside the scope of this article. Likewise, other social media platforms such as YouTube and TikTok, which have grown in popularity in more recent years, were not included. However, our searches did not find any professional presence on these platforms for any of the physicians in this study. Furthermore, our study did not use any metrics around the amount of social media usage or the prevalence of having more than one professional social media per sports team physician. Because of this limitation, analysis of how diversified sports team physicians' social media use is or how often sports team physicians use social media were unable to be considered. There were also instances in our analysis where some cohorts had a sample size of 0. In these cases, statistical tests were not applicable due to a lack of data, preventing us from discovering potentially significant findings.

## Conclusion

73.3% of professional team physicians from the MLS, MLL, MLR, WO, and WNBA have a social media presence, with over half using LinkedIn. Fellowship-trained physicians were significantly more likely to use social media, and 100% of physicians with social media presence were fellowship-trained. MLS and WO team physicians were significantly more likely to use LinkedIn ( $P = .02$ ). MLS team physicians were significantly more likely to use social media overall ( $P = .004$ ). No other metric significantly impacted social media presence.

## References

1. Surani Z, Hirani R, Elias A, et al. Social media usage among health care providers. *BMC Res Notes* 2017;10:654.
2. Benetoli A, Chen TF, Aslani P. How patients' use of social media impacts their interactions with healthcare professionals. *Patient Educ Couns* 2018;101:439-444. PMID: 28882545.
3. Rupert DJ, Moultrie RR, Read JG, et al. Perceived healthcare provider reactions to patient and caregiver use of online health communities. *Patient Educ Couns* 2014;96:320-326.
4. Househ M, Borycki E, Kushniruk A. Empowering patients through social media: The benefits and challenges. *Health Inform J* 2014;20:50-58.
5. Young S, Zheng Q, Zeng DD, Zhan Y, Cumberland W. Social media images as an emerging tool to monitor adherence to COVID-19 public health guidelines: A content analysis. *J Med Internet Res* 2022;24:e24787.
6. Bram JT, Jia L, Huffman W, Ahn J. Orthopaedic surgery residency program social media presence during the COVID-19 pandemic. *JBS Open Access* 2021;6:e21.00073.

7. Abbas MJ, Jildeh TR, Khalil LS, et al. Social media use continues to increase among orthopaedic residency programs in the United States. *Arthrosc Sports Med Rehabil* 2021;3:e1761-e1767.
8. Hanzel T, Richards J, Schwitters P, et al. DocsOnTwitter: How physicians use social media to build social capital. *Hosp Top* 2018;96:9-17.
9. Miller EA, Pole A. Diagnosis blog: checking up on health blogs in the blogosphere. *Am J Public Health* 2010;100:1514-1519.
10. Ventola CL. Social media and health care professionals: Benefits, risks, and best practices. *P T* 2014;39:491-520.
11. Cho M, Li A, Furnas H, Rohrich R. Current trends in the use of social media by plastic surgeons. *Plast Reconstr Surg* 2020;146:83e-91e.
12. Haeberle H, Egger A, Navarro S, et al. Social media and pediatric scoliosis: An analysis of patient and surgeon use. *Surg Technol Int* 2017;31:189-196.
13. LaGrant B, Navarro SM, Becker J, Shaikh H, Sulapas I, Shybut T. Fellowship training is a significant predictor of sports medicine physician social media presence. *Arthrosc Sports Med Rehabil* 2021;3:e199-e204.
14. Pallardy C. 32 Team physicians for professional soccer teams. Becker's Spine Review. <https://www.beckersspine.com/spine-lists/item/15430-32-team-physicians-for-professional-soccer-teams.html> 2013. Accessed December 12, 2021.
15. Garrity M. Meet 12 U.S. 2018 Winter Olympics head team physicians. Becker's Spine Review. <https://www.beckersspine.com/sports-medicine/item/39811-meet-12-u-s-2018-winter-olympics-head-team-physicians.html> 2018. Accessed December 12, 2021.
16. Dryda L. 82 Orthopedic & sports medicine team physicians for professional hockey. Becker's Spine Review. <https://www.beckersspine.com/lists/item/10872-82-orthopedic-sports-medicine-team-physicians-for-professional-hockey-20Becker-92s-20Spine-20Review> 2012. Accessed December 12, 2021.
17. Dryda L. 92 Team physicians for professional basketball. Becker's Spine Review. <https://www.beckersspine.com/lists/item/10614-92-team-physicians-for-professional-basketball> 2012. Accessed December 18, 2021.
18. Dryda L. Boston Cannons Lacrosse Team Names Cambridge Health Alliance Official Medical Provider. Becker's Spine Review. <https://www.beckersspine.com/sports-medicine/item/3835-boston-cannons-lacrosse-team-names-cambridge-health-alliance-official-medical-provider.html> 2011. Accessed December 11, 2021.
19. Hameed I, Oakley CT, Ahmed A. Analysis of physician use of social media. *JAMA Netw Open* 2021;4:e2118213.
20. Rege A. US News ranks 'Best Medical Schools 2019'. Becker's Spine Review. <https://www.beckershospitalreview.com/rankings-and-ratings/us-news-ranks-best-medical-schools-2019.html> 2018. Accessed September 1, 2019.
21. US News & World Report. *Best Hospitals for Orthopedics* 2019-2020. <https://health.usnews.com/best-hospitals/rankings/orthopedics>. Accessed September 1, 2019.
22. McCormick JR, Patel MS, Hodakowski AJ, et al. Social media use by shoulder and elbow surgeons increases the number of ratings on physician review websites. *J Shoulder Elbow Surg* 2021;30:e713-e723.
23. Vardanian AJ, Kusnezov N, Im DD, Lee JC, Jarrahy R. Social media use and impact on plastic surgery practice. *Plast Reconstr Surg* 2013;131:1184-1193.
24. Moorhead SA, Hazlett DE, Harrison L, Carroll JK, Irwin A, Hoving C. A new dimension of health care: Systematic review of the uses, benefits, and limitations of social media for health communication. *J Med Internet Res* 2013;15:e85.
25. Marsh H, Almekdash M, Rossette S, John A, Pelham K, Magers B. Implications of age on social media utilization in health care practice development: Cross-sectional survey study. *JMIR Hum Factors* 2021;8:e27528.
26. McCarroll M, Armbruster S, Chung J, Kim J, McKenzie A, Gruenigan V. Health care and social media platforms in hospitals. *Health Commun* 2014;29:947-952.
27. Rolls K, Hansen M, Jackson D, Elliot D. How health care professionals use social media to create virtual communities: an integrative review. *J Med Internet Res* 2016;18:e166.
28. Finch CF, Kenihan MA. A profile of patients attending sports medicine clinics. *Br J Sports Med* 2001;35:251-256.
29. Raveh D, Gratch L, Yinnon AM, Sonnenblick M. Demographic and clinical characteristics of patients admitted to medical departments. *J Eval Clin Pract* 2005;11:33-44.
30. Curry E, Li X, Nguyen J, Matzkin E. Prevalence of internet and social media usage in orthopedic surgery. *Orthop Rev (Pavia)* 2014;6:5483.
31. Soyer A, AAOS Practice Management Committee. *Social media in healthcare: A primer for orthopaedic surgeons*. Rosemont, IL: American Academy of Orthopaedic Surgeons, 2012.
32. McLawhorn AS, De Martino I, Fehring KA, Sculco PK. Social media and your practice: Navigating the surgeon-patient relationship. *Curr Rev Musculoskelet Med* 2016;9:487-495.
33. Makhni EC, Buza JA, Byram I, Ahmad CS. Academic characteristics of orthopedic team physicians affiliated with high school, collegiate, and professional teams. *Am J Orthop* 2015;44:510-514.