OPINION



The top social media influencers in obstetrics and gynecology on twitter

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Social media has transformed medicine allowing physicians to connect with their colleagues, share medical knowledge, and promote academic publications [1]. Physicians can also connect with patients, disseminating pertinent medical knowledge [2]. Because of the accessibility of social media and the large number of users posting information, it is important to identify reliable individuals for patients and physicians to follow.

This study identifies the top medical journals, organizations, and physician influencers in ob/gyn and related subspecialties on Twitter. We compared rank with journal impact factor and physician h-index. The purpose of this study is to identify reliable and active ob/gyn influencers. This study will allow physicians and patients to identify key individuals to follow in ob/gyn and have confidence they are reading reliable information.

We modeled our methods on a previous study by Riccio et. al [3], utilizing the Right Relevance API (rightrelevance. com, San Francisco, CA, United States) to collect Twitter influencer scores on June 28, 2022. Right Relevance API assesses Twitter users' followers/followings and engagement (views, likes, retweets) to provide a numerical rank of influence. It uses graph partitioning to determine influence scores for topic searches [4]. We searched "obgyn" and abstracted the top 10 medical journals, top 10 organizations, and top 100 physician influencers.

The following specialties were included: female pelvic medicine and reconstructive surgery, gynecology oncology, maternal-fetal medicine, reproductive endocrinology,

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complex family planning, minimally invasive gynecologic surgery, pediatric & adolescent gynecology, and urogynecology. These specialties were included based on their recognition by the American Board of Obstetrics & Gynecology.

After identifying the top 10 medical journals, we obtained their Journal Impact Factor as reported by the journal. After identifying the top 100 physician influencers, we obtained their academic h-index scores from Google Scholar and SCOPUS. Google scholar was searched first and if the physician did not have a Google Scholar page, we searched SCOPUS after. Practice location was found as reported by the physician on Twitter or by their board certification. Board certification was confirmed for United States based physicians using certificationmatters.org [5]. Two independent reviewers abstracted the table data (LJD & DVV). All data entries were then checked by the first author (SG), who ensured accuracy and resolved any discrepancies. Descriptive statistics were performed and reported. The coefficient of determination (r²) was calculated between (1) journal impact factor and twitter influence rank and (2) physician h-index and twitter influence rank.

The top 10 ob/gyn medical journals are shown in Table 1. The average impact factor of the top 10 ob/gyn medical journals was 5.0, with a median of 5.5. The coefficient of determination (r^2) between impact factor and twitter influence rank was 0.0379 (Fig. 1). The top 10 ob/gyn medical organizations are shown in Table 2.

Of the top 100 physician influencers, 47% are general ob/gyn physicians, followed by the subspecialties: 11% specialize in maternal–fetal medicine, 9% minimally invasive gynecologic surgery, 6% reproductive endocrinology and infertility, 3% gynecologic oncology, 3% female pelvic medicine and reconstructive surgery, 3% urogynecology, 2% pediatric and adolescent gynecology, 1% family planning and 1% reproductive genetics (Table 3). Of the top 100 physicians, 14% were in non-ob/gyn specialties, including



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Table 1 Top 10 ob/gyn medical journals

Rank	Medical Journal	Twitter Handle	Impact Factor	
1	Obstetrics and Gynecology (The Green Journal)	@greenjrnl	7.661	
2	Contemporary Ob/Gyn	@contempobgyn	0.038	
3	American Journal of Obstetrics and Gynecology (AJOG)	@ajog_thegray	8.661	
4	An International Journal of Obstetrics and Gynaecology (BJOG)	@bjogtweets	6.531	
5	Fertility and Sterility	@fertstert	7.329	
6	International Journal of Gynecology & Obstetrics (IJGO)	@ijgolive	4.447	
7	Contraception	@contraceptionjl	3.051	
8	Menopause Journal	@menopausejnrl	3.310	
9	Journal of Graduate Medical Education (JGME)	@journalofgme	1.23	
10	Medical Education	@meded_journal	7.647	

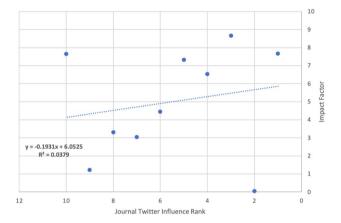


Fig. 1 Correlation between Twitter influence rank and journal impact

family medicine, pediatrics, emergency medicine, psychiatry, hematology and oncology, internal medicine, and pulmonology/critical care (Fig. 2).

The majority of physician influencers worked in the U.S. (91%), and specifically, California (15%), followed by New York and Texas (11%) (Fig. 3). The average

h-index of the top 100 physician influencers was 13.6, with a median of 8.5. The coefficient of determination (r^2) between h-index and twitter influence rank was 0.0092. All U.S. physicians were board certified (Fig. 4).

This study found that of the top ob/gyn medical journals, 80% were ob/gyn or women's health focused, while 20% were education focused. We found a positive correlation between journal Twitter influence rank and journal impact factor. This can be due to higher ranked journals tweeting more frequently about newly accepted articles to increase journal readership.

The majority of influencers were general ob/gyn physicians. The top ob/gyn subspecialties included 9 different specialties, and 7 non-ob/gyn specialties. The majority of influencers were from the United States, and specifically California, New York, and Texas. There was an inverse correlation with Twitter influence rank and influencer academic h-index, where people ranked lower in Twitter influence actually had a higher h-index. This may indicate that Twitter influence rank is not a valid predictor of academic productivity as measured by h-index. This may change with time as more physicians continue to turn to Twitter to promote their academic papers, and as newer generations of

Table 2 Top 10 ob/gyn organizations

Rank	Organization Name	Twitter Handle
1	American College of Obstetricians and Gynecologists (ACOG)	@acog
2	Society for Maternal-Fetal Medicine (SMFM)	@mysmfm
3	American Society of Reproductive Medicine (ASRM)	@reprodmed
4	Royal College of Obstetricians & Gynaecologists	@rcobsgyn
5	Association of Professors of Gynecology & Obstetrics (APGO) News	@apgonews
6	MD Edge ObGyn	@mdedgeobgyn
7	Medscape Ob/Gyn	@medscapeobgyn
8	International Society of Ultrasound in Obstetrics and Gynecology (ISUOG)	@isuog
9	American Association of Gynecologic Laparoscopists (AAGL)	@aagl
10	Society of Academic Specialists in General Obstetrics and Gynecology (SASGOG)	@sasgog



 Table 3
 Top 100 ob/gyn physician influencers

Rank	Name	Twitter handle	Specialty/subspecialty	Practice Location (City, State, Country)	h-index
1	Camille A. Clare	@cclaremdmph	ob/gyn	Manhattan, New York, United States	11
2	Amanda P. Williams	@kpobgyndoc	ob/gyn	Oakland, California, United States	_
3	Kelly Wright	@migsrunner	Minimally invasive gynecologic surgery	Los Angeles, California, United States	8
4	Yalda Afshar	@yafshar	Maternal-fetal medicine	Los Angeles, California, United States	18
5	Ruth Ann Crystal	@catchthebaby	ob/gyn	Mountainview, California, United States	2
6	Jane van Dis	@janevandis	ob/gyn	Rochester, New York, United States	6
7	Pietro Bortoletto	@bortolettomd	Reproductive endocrinology and infertility	Boston, Massachusetts, United States	13
8	Diane Horvath	@gynandtonic	Family planning	Baltimore, Maryland, United States	1
9	Meadow Maze Good	@meadowgood	Female pelvic medicine and reconstructive surgery	Orlando, Florida, United States	11
10	Danielle Jones	@mamadoctorjones	ob/gyn	Austin, Texas, United States and Aotearoa New Zealand	-
11	Joia Crear Perry	@doccrearperry	ob/gyn	New Orleans, Louisiana, United States	10
12	Lisa Hollier	@txmommydoc	Maternal-fetal medicine	Houston, Texas, United States	25
13	Jennifer Ashton	@drjashton	ob/gyn	Engelwood, New Jersey, United States	-
14	Kemi Doll	@kemidoll	Gynecologic oncology	Seattle, Washington, United States	22
15	Amy Lasky	@amylaskymd	ob/gyn	Stony Brook, New York, United States	_
16	Amy Park	@dramypark	Female pelvic medicine and reconstructive surgery	Cleveland, Ohio, United States	16
17	Cynthia Gyamfi	@drcynthiagyamfi	Maternal-fetal medicine	San Diego, California, United States	45
18	Mallory Stuparich	@malstumd	Minimally invasive gynecologic surgery	Riverside, California, United States	5
19	Leah Torres	@leahntorres	ob/gyn	Salt Lake City, Utah, United States	5
20	Roberta Gebhard	@drrgebhard	Family medicine	Grand Island, New York, United States	3
21	Jackie Parchem	@jackie_parchem	Maternal-fetal medicine	Houston, Texas, United States	10
22	Cara R. King	@drcaraking	Minimally invasive gynecologic surgery	Cleveland, Ohio, United States	7
23	Jeanne Conry	@conryjeanne	ob/gyn	Sacramento, California, United States	12
24	Maya Hammoud	@maya_michigan	ob/gyn	Ann Arbor, Michigan, United States	27
25	Danielle Prentice	@dkirch888	Maternal-fetal medicine	Hershey, Pennsylvania, United States	4
26	Helen Kang Morgan	@helenjkmorgan	ob/gyn	Ann Arbor, Michigan	11
27	Laura Riley	@obdocriley	Maternal-fetal medicine	New York, New York, United States	31
28	Judette Louis	@judettelouis	Maternal-fetal medicine	Tampa, Florida, United States	28
29	Jennifer Ashton	@drjashton	ob/gyn	New York City, New York, United States	-
30	Mireille Truong	@drmtruong	Minimally invasive gynecologic surgery	Los Angeles, California, United States	8
31	Natasha Bhuyan	@natashabhuyan	Family medicine	Phoenix, Arizona, United States	4
32	Jessica Shepherd	@jshepherd_md	Minimally invasive gynecologic surgery	Dallas, Texas, United States	_
33	Olga Muldoon	@olgatheobgyn	Minimally invasive gynecologic surgery	Denver, Colorado, United States	1
34	Veronica Pimentel	@drveropimentel	Maternal-fetal medicine	Hartford, Connecticut, United States	4
35	Katherine McHugh	@ktmch	ob/gyn	Indianapolis, Indiana, United States	4
36	Tamika Auguste	@obyourself	ob/gyn	Washington D.C., United States	8
37	Kristin Lyerly	@kristinlyerly	ob/gyn	Green Bay, Wisconsin, United States	0
38	Carrie Cwiak	@drcarrieobgyn	ob/gyn	Atlanta, Georgia, United States	16
39	Chase Anderson	@chasetmanderson	Psychiatry	San Francisco, California, United States	_
40	Jill Grimes	@jillgrimesmd	Family medicine	Austin, Texas, United States	_
41	Elizabeth Howell	@lizhowellmd	ob/gyn	Philadelphia, Pennsylvania, United States	34
42	Fiona Mattatall	@fionamattatall	ob/gyn	Calgary, Alberta, Canada	3
43	Jeff Livingston	@macobgyn	ob/gyn	Irving, Texas, United States	1
44	Jim Thornton	@jimgthornton	ob/gyn	Nottingham, United Kingdom	65



 Table 3 (continued)

Rank	Name	Twitter handle	Specialty/subspecialty	Practice Location (City, State, Country)	h-index
45	Shanna M. Combs	@drshannacombs	Pediatric and adolescent gynecology	Fort Worth, Texas, United States	1
46	Christina Saad	@christinasaadmd	Minimally invasive gynecologic surgery	Los Angeles, California, United States	1
47	Shannon McNamara	@shannonomac	Emergency medicine	New York, New York, United States	4
48	Rebecca Szabo	@inquisitivegyn	ob/gyn	Melbourne, Australia	9
49	Ian Fields	@eeyanmiller	Urogynecology	Portland, Oregon, United States	5
50	Komal Bajaj	@komalbajajmd	reproductive genetics	New York, New York, United States	19
51	Charlene Collier	@chcollier	ob/gyn	Jackson, Mississippi, United States	6
52	Genevieve Eastabrook	@placentadoc	Maternal-fetal medicine	London, Ontario, Canada	11
53	Ariela Marshall	@amarshallmd	Hematology and oncology	Philadelphia, Pennsylvania, United States	18
54	Staci Tanouye	@drstacit	ob/gyn	Jacksonville, Florida, United States	3
55	Michelle Owens	@drmichelleowens	Maternal-fetal medicine	Jackson, Mississippi	18
56	Nicholas Fogelson	@academicobgyn	Minimally invasive gynecologic surgery	Portland, Oregon, United States	5
57	Erica Marsh	@ericamarshmd	Reproductive endocrinology and infertility	Ann Arbor, Michigan, United States	26
58	Serena H Chen	@drserenahchen	Reproductive endocrinology and infertility	Livingston, New Jersey	14
59	Cheryl Iglesia	@cheryliglesia	Urogynecology	Washington, D.C., United States	26
60	Aimee Eyvazzadeh	@_eggwhisperer	Reproductive endocrinology and infertility	San Francisco, California, United States	11
61	Dani Jackson	@drdanijackson	Psychiatry	New York, New York, United States	3
62	Megan L. Evans	@meganevansmd	ob/gyn	Boston, Massachusetts, United States	5
63	Lesley Regan	@lregan7	ob/gyn	London, England	66
64	Dr. Brandi Ring	@dr_b_ring	ob/gyn	Aurora, Colorado, United States	0
65	Ghazaleh Moayedi	@dr_moayedi	ob/gyn	Dallas, Texas, United States	3
66	Amanda Selk	@dramandaselk	ob/gyn	Toronto, Ontario, Canada	11
67	Pooja Mehta	@poojakmehta	ob/gyn	Boston, Massachusetts, United States	10
68	Lora Shahine	@drlorashahine	Reproductive endocrinology and infertility	Seattle, Washington, United States	14
69	Gretchen Winter	@gretchemaben	Pulmonology/ critical care	Indianapolis, Indiana, United States	_
70	Joannie Yeh	@betamomma	Pediatrics	Broomall, Pennsylvania, United States	_
71	Zoë Julian	@doczo1	ob/gyn	Birmingham, Alabama, United States	4
72	Payam Katebi Kashi	@payamkashimd	Gynecologic oncology	Baltimore, Maryland, United States	2
73	Vandna Jerath	@drjerath	ob/gyn	Denver, Colorado, United States	_
74	Rodrigo Muñoz	@drigomunoz	ob/gyn	Chapel Hill, North Carolina, United States	1
75	Kelly Doran	@kellymdoran	Emergency medicine	New York, New York, United States	23
76	Sarah Temkin	@temkins	Gynecologic oncology	Washington, DC, United States	26
77	Sarah J. Kilpatrick	@sarah_sjk	maternal-fetal medicine	Los Angeles, California, United States	19
78	Sony S Singh	@drsonysinghmd	Minimally invasive gynecologic surgery	Ottawa, Ontario, Canada	25
79	Chitra Akileswaran	@chitra_mdmba	ob/gyn	Oakland, California, United States	4
80	Eve Feinberg	@drevefeinberg	Reproductive endocrinology and infertility	Chicago, Illinois, United States	15
81	Melissa Simon	@drmelissasimon	ob/gyn	Chicago, Illinois, United States	71
82	Yolanda Kirkham	@dryolandak	Pediatric and adolescent gynecology	Toronto, Ontario, Canada	7
83	Michael Chaikof	@michaelchaikof	Urogynecology	Toronto, Ontario, Canada	3
84	Beri Ridgeway	@beridgeway	Female pelvic medicine and reconstructive surgery	Cleveland, Ohio, United States	26
85	Riordan Ledgerwood	@ledgemd	Pediatrics	Fort Hood, Texas, United States	1
86	Tricia Wright	@triciaewrightmd	ob/gyn	San Francisco, California, United States	11
87	Katherine Chretien	@motherinmed	Internal medicine	Baltimore, Maryland	_



Table 3 (continued)

Rank	Name	Twitter handle	Specialty/subspecialty	Practice Location (City, State, Country)	h-index
88	Kavita Shah Arora	@kavitashaharora	ob/gyn	Chapel Hill, North Carolina, United States	15
89	Nathaniel DeNicola	@ndenicolamd	ob/gyn	Washington, DC, United States	8
90	Kristyn Brandi	@drkbrandi	ob/gyn	Montclair, New Jersey, United States	4
91	Christina Salazar	@salazarmigs	ob/gyn	Austin, Texas, United States	4
92	Margaret Russell	@margaret1473	Family medicine	Chicago, Illinois, United States	0
93	Shawn Tassone	@tassonedoc	ob/gyn	Austin, Texas, United States	2
94	Lisa Kane Low	@kanelow	Family medicine	Rogers, Arkansas, United States	37
95	Amy Alexander	@amyalexmd	ob/gyn	Asheville, North Carolina, United States	-
96	Amy Tuteur	@atuteur	ob/gyn	Boston, Massachusetts, United States	1
97	Christine Foley	@docfoleygyn	ob/gyn	Providence, RI, United States	3
98	Margaret Polaneczky	@tbtam	ob/gyn	New York, New York, United States	15
99	Adam Balen	@balenadam	ob/gyn	Leeds, England	77
100	Suzanne Gilberg-Lenz	@askdrsuzanne	ob/gyn	Beverly Hills, California, United States	-

Fig. 2 Specialties of the Top 100 Twitter Influencers in ob/

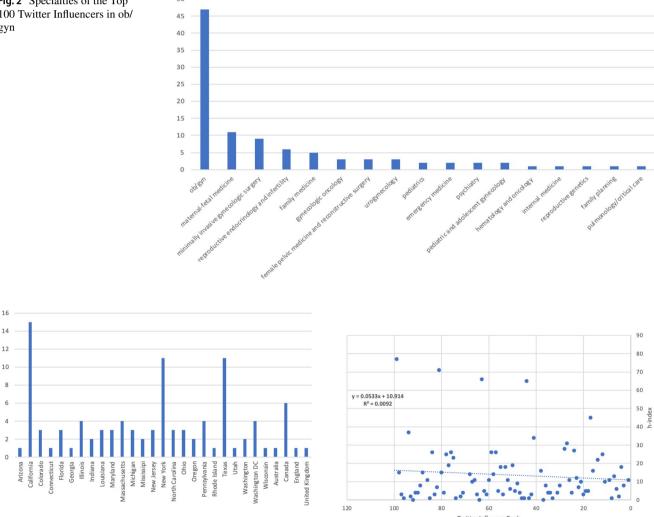


Fig. 3 Locations of the Top 100 Twitter Influencers in Ob/Gyn

Fig. 4 Correlation between Twitter influence rank and h-index

physicians who grew up with social media rely more heavily on it. Additionally, h-index alone, does not encompass all forms of academic productivity, including teaching positions (e.g., assistant, associate, and professor of medicine), leadership roles (e.g., clerkship directors, research chairs, deans of medical schools), and advocacy.

Physicians use social media for a variety of reasons, including advancing medical research, advancing clinical practice, communicating with other physicians, and providing health information for patients [6]. Health misinformation spread on Twitter can lead to delays or prevention of necessary care, or even threaten patient lives [7].

The importance of providing patients with reliable information is highlighted by the influx of abortion-related information following the Supreme Court decision in *Dobbs v. Jackson Women's Health Organization*. Widespread confusion surrounding new anti-abortion laws resulted in the dispersal of misinformation regarding how herbs or toxins could be used to perform abortions at home [8]. Physicians expressed concerns that online misinformation may cause patients seeking an abortion to try unsafe methods[7]. Patients need to be able to identify legitimate leaders in ob/gyn to receive reliable information on safe abortion practices.

Twitter has become increasingly popular in the medical community to facilitate connections, communication, and academic promotion. During unprecedented times such as the COVID-19 pandemic, and the post-*Dobbs* legal climate, more people turn to Twitter for information. Knowing legitimate influencers in ob/gyn permits Twitter users to follow reliable accounts. With the increasing reliance on Twitter by both physicians and patients, medical professionals should embrace Twitter, abide by ethical guidelines, and only promote reliable information.

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Data availability The data that support the findings of this study are available in Right Relevance at https://www.rightrelevance.com/.

Declarations

Conflict of interest The authors declare that they have no conflict of interest.

Ethical approval N/A.

Consent to participate N/A.

Consent to publish N/A

References

- Fox CS, Barry K, Colbert J (2016) Importance of social media alongside traditional medical publications. Circulation 133:1978–1983
- Grajales FJ, Sheps S, Ho K, Novak-Lauscher H, Eysenbach G (2014) Social media: a review and tutorial of applications in medicine and health care. J Med Internet Res 16(2):e13
- Isabel R, Dumont AS, Wang A (2022) The top 100 social media influencers in neurosurgery on Twitter. Interdiscipl Neurosurg. 29:1015
- Right relevance: Influencers, articles and conversations. https:// www.rightrelevance.com/ Accessed 13 Sept 2022.
- 5. certificationmatters.org
- Chen J, Wang Y (2021) Social media use for health purposes: systematic review. J Med Int Res. 23(5):e17917
- Wang Y, McKee M, Torbica A, Stuckler D (2019) Systematic literature review on the spread of health-related misinformation on social media. Soc Sci Med 240:112552. https://doi.org/10.1016/j. socscimed.2019.112552
- Thomas N. Doctors worry that online misinformation will push abortion-seekers toward ineffective, dangerous methods. CNN. https://www.cnn.com/2022/07/13/health/abortion-misinforma tion-social-media/index.html. Published July 13, 2022. Accessed 15 Sept 2022.

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