Resident Assembly Business Meeting

Agenda and Background Materials

Monday, April 20, 2020

8:00 PM ET/7:00 PM CT

https://global.gotomeeting.com/join/280174229

Join the Dialog:
Dial-in: (888) 875.1833
Passcode: 260-260-9745
Resident Assembly Business Meeting
Monday, April 20, 2020
8:00 PM ET/7:00 PM CT

AGENDA

8:00 PM  SECTION I: CALL TO ORDER/DISCLOSURE  (Dr. Fourman) .................................

1. Disclosure of Conflicts of Interest .................................................................
2. Welcome to the RA Business Meeting ...........................................................
3. Annual Report .................................................................................................

8:10 PM  SECTION II: Business Meeting  (Drs. Fourman and Graham) ...........................

1. 2020 Advisory Opinions
   Discuss RA Executive Committee’s Recommendations
   Action: Vote (Delegates Only)
2. 2020 Rules and Procedures ..............................................................................
   Discuss updates to Rules and Procedures
   Action: Vote (Delegates Only)
3. Members at Large ...........................................................................................
   Applicants address the RA
   Action: Vote (All Residents)

8:50 PM  SECTION III: 2020-2021 Resident Assembly  (Dr. Fourman) ............................

1. PAC Update with Kevin Cronin, MD .................................................................
2. Announcement of Chair, Vice Chair, and Committee Chairs ...........................
3. 2020-2021 Goals for the RA ...........................................................................

9:00 PM  Adjourn

Appendix
Committee Roster ...............................................................................................}
Committee Charges ............................................................................................}
AAOS Strategic Plan ..........................................................................................}
Mandatory Disclosure Policy ..............................................................................}
Travel Policy .......................................................................................................}
Code of Ethics .....................................................................................................}
Antitrust Reminder ..............................................................................................}
AAOS Governance Structure .............................................................................}
Anti-Harassment Policy and Procedures .............................................................
Resident Assembly - Executive Committee

- **Mitchell Fourman, MD** (Chair): (This individual reported nothing to disclose); Submitted on: 04/12/2019
- **Robert David Graham, MD** (Vice Chair): Submitted on: 05/09/2019
  - AAOS: Board or committee member
- **Benjamin Maurice Braun, MD** (Member): Submitted on: 11/29/2019
  - AAOS: Board or committee member
  - Bristol-Myers Squibb: Stock or stock Options
  - Zimmer: Stock or stock Options
- **Molly Day, MD, ATC** (Member): (This individual reported nothing to disclose); Submitted on: 12/05/2019
- **Christine Marie Dipompeo, MD** (Member): (This individual reported nothing to disclose); Submitted on: 12/18/2018
- **Andrew Jensen, MD** (Member): Submitted on: 10/03/2019
  - AAOS: Board or committee member
- **Tyler Charles McDonald, MD** (Member-At-Large): Submitted on: 04/02/2020
  - AAOS: Board or committee member
- **Ayoosh Pareek, MD** (Member): (This individual reported nothing to disclose); Submitted on: 03/14/2020
- **Stephanie S Pearce, MD** (Member): Submitted on: 09/27/2019
  - AAOS: Board or committee member
  - Ruth Jackson Orthopaedic Society: Board or committee member
- **Cory Daniel Smith, MD** (Member-At-Large): (This individual reported nothing to disclose); Submitted on: 05/09/2019
- **Marcella Rae Woiczik, MD, FAAOS** (Member): (This individual reported nothing to disclose); Submitted on: 10/03/2019
- **Kristen Erickson, CAE** (Staff Liaison): (This individual reported nothing to disclose); Submitted on: 10/08/2019
ANNUAL REPORT OF THE RESIDENT ASSEMBLY
2020

Respectfully submitted by Mitchell S. Fourman, MD M.Phil; Chair

Introduction
The Resident Assembly (RA) held their fifth meeting at the 2019 Annual Meeting in Las Vegas with over 200 residents and fellows in attendance. Subject matter committees met in person, and throughout the year, and their updates are below.

The RA conducted their fourth advisory opinion process in 2019, which included submission of three advisory opinions, an open forum at the Annual Meeting, and voting by delegates during the RA business meeting.

As the voice of the residents, advisory opinions were reviewed by the Emerging Professionals Committee (EPC), and the Membership and Leader Development Committee (MLDC). The MLDC recommended a plan for each advisory opinion at their July 2019 meeting, and progress is being made on these recommendations. The overall impact of advisory opinions has been felt throughout the RA and AAOS. Successful advisory opinions have led to the creation of the Advocacy Milestones program, the creation of the JAAOS “Unplugged” podcast, and RA collaboration in the creation of a detailed fellowship database. This upcoming year three advisory opinions were submitted, which deal with social media guidelines, medical student interest group coordination, and expansion of the JAAOS podcast. We look forward to continued collaboration with the AAOS on these and future advisory opinions.

In addition, the 2019-2020 RA Executive Committee met at both the 2019 National Orthopaedic Leadership Conference (NOLC) and Fall Meeting. At the NOLC and Fall Meeting, the committee was able to participate in symposia, observe the Board of Councilors (BOC) and Board of Specialty Societies (BOS), and network with colleagues and fellow attendees. Committee members were also able to participate in the Hill Visits and a resident advocacy session at the NOLC. Of note, the RA Executive Committee (10 members) reached 100% PAC participation.

Currently, the Resident Assembly has over 150 delegate seats filled and is actively seeking delegates from all residency programs. Dr. Mitchell Fourman, Chair of the Resident Assembly has charged the RA with continuing to adapt to better serve resident concerns, present cogent recommendations to the AAOS, and represent the values and ideals of the AAOS as written in the 5-year plan. To best accomplish this, he has proposed that the RA represent first and foremost “Three Pillars”: Diversity, Recruitment, and Scholarship. Each Pillar represents one or more multi-year projects in direct collaboration with AAOS aims and charges, in line with the 5-year plan. It also represents the first attempt by the RA to develop a global multi-year strategy that encourages cross-committee collaboration and a face towards the future. Each Advisory Opinion submitted this year was designed with the “Three Pillars” in mind, and it is Dr. Fourman’s hope that this represents the RA’s first step towards providing residents with projects and involvement that span their training. He also hopes that this approach may serve as an improved source of branding and recruitment for the RA, and by extension AAOS.

In addition to a new internal executive approach, the Resident Assembly continues to build and develop strategic relationships with key committees, councils, and members of the AAOS, which included the RA Executive Committee continuing a key contact program with the leadership of the BOC and the BOS. Members of the Resident Assembly have contributed numerous articles to publications such as the JAAOS, AAOS Now, Residents’ Newsletter, among others. Past Present Andrew Jensen, MD continues to headline his highly successful “JAAOS Unplugged” podcast, which has been recognized for its high programmatic quality and greater than expected listenership. Research Chair Ayoosh Pareek has received significant RA membership interest in the expansion of this podcast in conjunction with JAAOS and under the advisory of the editorial staff and Dr. Jensen, and has submitted an Advisory Opinion requesting conditional funding for this incredible resident opportunity. Further advancements in RA/AAOS collaboration include the Advocacy Milestones program spearheaded by former RA Health Policy Chair Kevin Cronin MD, the RA testing of a proposed AAOS education curriculum with key contact...
Chair Stephanie Pearce MD, and the involvement of the RA in the genesis of a new direction in AAOS social media direction thanks to efforts of Innovation Committee chair Ben Braun MD.

The RA Nominating Committee solicited Chair and Vice-Chair applications for the 2019-2020 leadership year. This year had three competitive applicants for the Vice-Chair position, representing unprecedented interest in the position. After thoughtful review, the Committee selected Cory Smith, MD from Greenville SC to serve as the RA Chair and Stephanie Stopka Pearce, MD previously of South Alabama and a current fellow at Children’s Hospital Colorado to serve as the RA Vice-Chair. The RA members will elect the two member-at-large positions from another unprecedented pool of four applicants during the annual business meeting, and the five subject matter committees will elect a chair prior to the 2020 annual committee meetings.

The RA will hold their sixth meeting at the 2020 Annual Meeting in Orlando where all subject matter committees and the executive committee will meet. Members will review three submitted advisory opinions at the open forum and delegates will vote during the business meeting on issues including but are not limited to: JAAOS podcasts, social media guidelines, the development of an OSIG toolkit, and the modification of the RA bylaws to permit increased communication between the Executive Committee and RA delegates and constituents.

Executive Committee Updates – Drs. Fourman, Graham, and Jensen.

Annual Objectives:
• Shall be the governing body of the AAOS Resident Assembly.
• Review all AAOS Resident Assembly Committee reports and actions.
• Reports to the Candidate, Resident, Fellows Committee.
• Submit Resident Assembly approved actions to the Candidate, Resident and Fellow Committee.
• Promotes the Resident Assembly among residents and residency programs.
• Educates residents and residency programs about the Resident Assembly.
• Provides orientation to Resident Assembly leadership and membership.

2019-2020 Goals
1. Continue to identify and develop leaders early in their training.
2. Continue to develop innovative ways to improve resident education.
3. Increase resident participation in advocacy.
4. Develop resources for medical students.
5. Develop and implement delegate communication strategy.
6. Engage and represent orthopaedic residents from around the country via regular communications with delegates.
7. Improve delegate representation to include 100% of eligible orthopaedic residency programs.
8. Develop leaders within the Resident Assembly by engaging resident members through subject matter committees and ad hoc workgroups.
9. Explore pathways to engage and involve medical student members.
10. Work with CAP-appointed resident members to coordinate efforts among various committees.
11. Collaborate with the PAC to continue expanding resident membership and involvement.
12. Continue to support subject matter committee initiatives and ongoing projects.
13. Review Rules and Procedures to ensure they serve the future direction of the RA.
14. Giving back to the community (volunteerism).
15. Review advisory opinion satisfaction, process.
16. Evaluate expansion of the key contact program.
17. Develop and implement a multi-year “Three Pillars” initiative to promote long-term resident involvement and focused project development.

Annual Accomplishments:
The Executive Committee met via conference call six times, and held in-person meetings at the Annual Meeting, NOLC and Fall Meeting.
A charge embraced by the Executive Committee was to adapt to the sweeping AAOS changes set forth as a part of the five-year plan. This involved some measure of RA reorganization, such as a rethinking of how medical students will be involved in our structure, and a big push for increased delegate recruitment and programmatic involvement. Thanks to the incredible efforts of Members-at-Large Cory Smith, MD and Tyler McDonald, MD we have seen a surge in DO and Canadian involvement in the RA, as well a further increase in the proportion of allopathic programs with assigned RA delegates.

Significantly, a new push for multi-year, longitudinal projects in conjunction with the AAOS was considered. The Executive Committee most highly valued Diversity, Recruitment, and Scholarships, tenets that were also primary considerations behind the genesis of the RA. These specific value-adds will be primary focuses of future RA administrations, and serve as beacons for inter-committee collaboration and increased RA visibility. Drs. Smith and Pearce were instrumental to the establishment of these Pillars, and have committed to promoting these values during their administration this upcoming year.

Committee Updates – note that committee updates and advisory opinions were developed amongst each committee in collaboration with staff liaisons and represent the proactive involvement of residents volunteering their time within AAOS. The RA is providing these types of opportunities to a greater degree than ever before and represents the single-largest benefit of the RA - resident leadership that will foster Academy leadership.

Career Development Committee – Dr. Dipompeo

Charges and Goals

Provide information on starting a career in orthopaedics, including
- Fellowship opportunities and Employment opportunities
- Develop, refine, and present practice management actions to the executive committee.

2019-2020 Goals

1. Create webinars to assist residents in choosing a fellowship or practice setting
2. Investigate opportunities with the White Coat Investor group
3. Look for ways to improve practice management education for residents
4. Author article(s) for AAOS Now
5. Submit items to the Resident Newsletter

Annual Accomplishments:
- Two part webinar series on choosing your orthopaedic specialty in collaboration with the AAOS Resident Education Committee:
  - Choosing your Orthopaedic Sub-Specialty: Part I – August 06, 2019
  - Choosing your Orthopaedic Sub-Specialty: Part II – August 22, 2019
- Four part webinar series in conjunction with Karen Zupko & Associates and the AAOS Coding Coverage & Reimbursement Committee:
  - The Necessities of Medical Necessity – October 02, 2019
  - CPT: More than just numbers – October 23, 2019
  - Relative Value Unit: What’s in an RVU? – November 14, 2019
  - Global Surgical Package Ins and Outs – December 10, 2019
- Article Submission for AAOS Now by Brian Muffly, MD on Physician Mentorship – pending approval
Education Committee – Dr. Pearce

Charges and Goals

- Review educational resources and provide educational opportunities for residents, including
  - Resources for OITE/ABOS preparation and
  - Information for study symposia.
- Provide a forum for collaborative discussion of educational issues among and between residents and the AAOS.
- Educate residents about critical education issues.
- Promote ideas and develop projects that advance orthopaedic education.
- Develop, refine, and present education actions to the executive committee.

2019-2020 Goals
1. Resident Education/AAOS Product Review Subcommittee to liaison between RA and the attending-led Education committee testing new and current products for improvement
2. Practice Management Educational resources/targets
3. Incorporate feedback from 2018 & 2019 mentor-mentee program into 2020 event & find assistant director/director-elect
4. Identify ways to improve resident education
5. Fellowship information standardization

Annual Accomplishments:
The committee has accomplished many goals this year, including: submitting an advisory opinion to coordinate and streamline fellowship information in one location, a webinar series on Orthopaedic specialties and choosing a fellowship for residents, working on the product review task force, the peer mentoring program at annual meeting, creating a database of global health opportunities, and putting together a resident specific course calendar of AAOS courses.

Health Policy Committee – Dr. Day

Charges and Goals

- Address issues affecting the field of orthopaedic surgery and orthopaedic residency training.
- Develop, refine, and present health policy actions to the executive committee.
- Collaborate with AAOS to promote resident engagement in political issues locally and nationally.
- Educate residents on the Orthopaedic Political Action Committee (PAC) and current political issues impacting orthopaedics.

2019-2020 Goals
1. Develop two webinars: fall webinar with guest keynote speaker and a spring resident-led webinar.
2. Publish 3-4 articles by HPC Committee members in AAOS Now.
4. Promote advocacy and health policy leadership opportunities for residents through involvement at NOLC.
5. Increase resident participation in state societies.
6. Increase PAC resident participation by reaching our goal of
   - 500 resident PAC members
   - 10 residency programs at 100% PAC participation
Annual Accomplishments:
The committee held multiple committee and small group conference calls throughout the year to continue work on previously established projects and develop new ones. We developed two webinars, one focused on resident advocacy opportunities, entitled Why Advocacy Matters: A Crash Course. The second webinar, entitled REDI, Set, Go: Advocating for Student Loan Reform, was a deep dive into legislation that would defer interest on student loans for residents and featured the two members of Congress who sponsored the legislation, Reps. Brian Babin and Jeff Van Drew. Committee members also worked on multiple articles for AAOS publications on topics including advocacy, the newly released Health Policy Milestones, Orthopaedic PAC, recently introduced legislation and how it affects residents, and the opioid epidemic. Resident donations to the OrthoPAC continued to increase drastically, reaching $12,000 raised by over 400 residents from 74 residency programs, and the entire Executive Committee renewing its commitment to lead the way by becoming Future Capitol Club Members. In addition, a record-breaking 10 residency programs achieved 100% participation in the PAC, the best in our history.

In 2019 the committee also launched the Health Policy Milestones, a product of a 2016 Resident Assembly Advisory Opinion and a project 3 years in the making, created to educate residents on the importance of advocacy and the Orthopaedic PAC. The Milestones project took shape as a curriculum, consisting of 3, 30-45 minute modules providing an in-depth look at health policy and advocacy, and ways to get involved both as a resident and throughout a member’s career. This program is live on the learn.aaos.org platform and residents who complete all three modules are dubbed ‘Advocacy Ambassadors’ and are invited to attend the National Orthopaedic Leadership Conference (NOLC) in Washington, DC.

Finally, the Washington Health Policy Fellows program officially launched for the new iteration of the program. In addition to serving on the Health Policy Committee, these fellows worked for a week each in the AAOS Office of Government Relations in Washington, DC, where they were able to dig in on the issues, experience advocacy first-hand, and take the time to visit the offices of Members of Congress, as well as attend political events in DC.

Research Committee – Dr. Pareek

Charges and Goals

- Promote research opportunities available to residents, including:
  - Awards,
  - Grants, and
  - Sub-specialty research activities.
- Promote the value of orthopaedic research among the orthopaedic resident community.
- Develop, refine, and present research actions to the executive committee

2019-2020 Charges
To encourage involvement of members within the committee by identifying member interests and engaging them in subcommittee projects
1. **AAOS Now:** Have four AAOS Now articles published
2. **Project Review:** Formalize and expand the resident reviewer program with the journal CORR
3. Collaborate with the Resident Assembly Education Committee to develop an online journal club discussing articles on the Resident Reading List, including:
   1. podcasts
4. **Webinars:** Develop content for two new webinars.

Annual Accomplishments:
Six subcommittees were created at the beginning of the year, each with a leader and additional participants. This has allowed for residents within the subcommittees to have primary leadership over specific projects and allow for more involvement.
1. **AAOS Now**
2. Journal Review
3. Webinars
4. Survey
5. Podcast

The committee wrote and/or planned 5 articles and is working with staff on submission:

Completed Articles:
- P- Values – Purpose, Power, and Potential Pitfalls
- Resident Research and Fellowship Applications: Quantity or Quality?
- Interpreting Vitamin D Controversies Continue to Pose Challenges
- Diagnostic Approaches for PJI Continue to Evolve

A Project Review Subcommittee also completed the following tasks:
- Established coordination with CORR editors to allow for Resident Reviewers in the Journal, which will be acknowledged.
- 8 CORR Reviews
- One JOR review with Dr. Albert Lin
- Further ideas-
  - Expand CORR reviewers
  - Add addition Orthopedic Journals for reviews (Spine, Arthroscopy, ASMAR, JBJS, etc.)

Ideas for new webinars:
- Financial Webinar?
- How to be a reviewer? Why it is important?
- Further ideas to be discussed during 2020 Annual Meeting

Future survey for Residents:
- Talk about resident research education
- Survey about Mentorship
- JAAOS Podcast
  - RARC would split episode with Yellow Journal Podcast
  - Need budget for podcast

_Innovation Committee – Dr. Braun_

_Charges and Goals_

Empower AAOS to engage with residents and fellows in training in pursuit of new technologies and to create educational opportunities.

2019-2020 Goals

1. **Value.** What it means to be a resident member of the AAOS.
2. Explore ways in which to communicate the value of AAOS through social media and other means.
3. **AJRR.** Investigate opportunities to increase resident engagement with AJRR.
4. **Social Media.** "Refresh" of the AAOS social media image. Allowing the AAOS Instagram feed to be "taken over" for a day by different residency programs, to show the public what goes into becoming an orthopedic surgeon.
5. **BoardEffect.** Transition and actively engage all RA members to BoardEffect.
Annual Accomplishments:
We sought to enhance both resident members and fellows of the AAOS value from their membership through access to resources. Access to the Orthopedic Video Theater has now been made available to all AAOS members at no charge. There is now special resident pricing for the archived annual meeting, which is substantially less than AAOS fellow pricing.

- **AJRR. Investigate opportunities to increase resident engagement with AJRR.**
  We continue to work with the AAOS on making registry data available to residents for research purposes. Currently residents are welcome to apply for registry access and research support through the AAOS Registry Analytics Institute. Quality and patient safety data is also available to residents for research purposes.

- **Social Media. "Refresh" of the AAOS social media image. Allowing the AAOS Instagram feed to be "taken over" for a day by different residency programs, to show the public what goes into becoming an orthopedic surgeon.**
  This committee continues to work with the social medial arm for the entire AAOS to define what is the best and most effective use of these accounts in order to communicate with both other health professionals and the general public. This committee will be submitting an actionable item at the Annual Meeting to define appropriate use of Academy sponsored social media, and social media conduct while representing the Academy.

- **BoardEffect. Transition and actively engage all RA members to BoardEffect.**
  The transition to boardeffect has gone very well and is now serving as a collaborative platform for not only the committee but the entire resident assembly. We look forward to continuing to utilize this fantastic resource.

Looking Ahead – Future Plans for the Resident Assembly

- Engage and represent orthopaedic residents from around the country via regular communications with delegates
- Improve delegate representation to include 100% of eligible orthopaedic residency programs
- Develop leaders within the Resident Assembly by engaging resident members through subject matter committees and ad hoc workgroups
- Explore pathways to engage and involve medical student members
- Work with CAP-appointed resident members to coordinate efforts among various committees
- Collaborate with the PAC to continue expanding resident membership and involvement
- Continue to support subject matter committee initiatives and ongoing projects
- Approve edited Rules and implement policies and procedures manual
- Include Delegate training during the AAOS Annual Meeting
- Create a five-year plan, focusing on diversity, scholarship, and recruitment
Resident Assembly Advisory Opinion #1

<table>
<thead>
<tr>
<th>State Main Purpose/Title</th>
<th>AAOS Social Media Guidelines for Residents and Fellows</th>
</tr>
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<tbody>
<tr>
<td>Resident’s Name</td>
<td>Mitchell Fourman, MD [1]</td>
</tr>
<tr>
<td></td>
<td>Benjamin Braun, MD [2]</td>
</tr>
<tr>
<td></td>
<td>Kyle Alpaugh, MD [2]</td>
</tr>
<tr>
<td>Residency Program</td>
<td>1. University of Pittsburgh Medical Center</td>
</tr>
<tr>
<td></td>
<td>2. University of Massachusetts Medical School</td>
</tr>
<tr>
<td>Are you a Resident Delegate?</td>
<td>Yes (To the AAOS, to the RA or Other)</td>
</tr>
<tr>
<td>Whereas</td>
<td>Social media has become ubiquitous throughout global society as a modality for rapidly disseminating information, views, and services.</td>
</tr>
<tr>
<td>Whereas</td>
<td>The unlimited reach of social media can put physicians who use it carelessly at risk of privacy/HIPAA violations, ethical or professional violations, and poor public perception. It may also compromise the doctor/patient relationship. (Bennett et al. Plast Reconstr Surg. 2018;142(3):388e-398e) (Hardouin et al. J Vasc Surg, 2019;67(6):e204)</td>
</tr>
<tr>
<td>Resolved A:</td>
<td>In conjunction with the Innovation Committee of the Resident Assembly, the AAOS consider development and dissemination of guidelines on the use of social media by residents and fellows. Such should include the following:</td>
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<td></td>
<td>- The responsible and professional use of social media for in-training residents and fellows, such as use of privacy controls; and</td>
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<td>- The risks and benefits of social media and its ability to influence, negatively and positively, the doctor/patient relationship and professional relationships; and</td>
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<td></td>
<td>- Reminders for residents and members to comply with ethical obligations and their institution’s policies regarding use of social media within the operating theater, as well as the display of content obtained intraoperatively, as this represents patients when they are most vulnerable; and</td>
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<tr>
<td>Resolved B:</td>
<td>Refer to the guidelines to the AAOS Communications Committee for consideration of ways to further these educational efforts, such as</td>
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<td>- Interactive trainings similar to media training offerings</td>
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<td></td>
<td>- Online modules similar to the health policy milestones curriculum which include case examples of social media being used appropriately and inappropriately; and</td>
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</tbody>
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Revised: 12/15
RESOLVED C: AAOS consider modifying its existing social media policy to allow the Resident Assembly to use AAOS resident-focused social media accounts with Instagram and Twitter on a pilot basis, with the understanding that any such use would comply with all AAOS social media policies and postings would be reviewed and vetted by AAOS.
Social media have attained an undeniably significant influence within medicine. Not only do they provide means of networking at professional conferences and discussing the latest scientific papers with colleagues, surgeons also use social media for marketing and branding, educating the public, and communicating directly with patients. Plastic surgeons have led the way in this regard, given the consumer-driven nature of the surgical services offered. Importantly, 59 to 70 percent of plastic surgery patients stated in prior surveys that the Internet functions as a valuable resource for evaluating plastic surgeons and understanding potential surgical procedures. Given the current cultural climate and the expectations of the public, almost 60 percent of surveyed plastic surgeons felt that social media engagement is inevitable and beneficial for the maintenance of a successful practice.

However, the prevalence of social media in the various surgical specialties should give us considerable pause. Breaches of patient confidentiality still occur, and these infractions are not without serious consequences. Even more disquieting is the sensationalism that distinguishes the content of social media posts by a small percentage of surgeons.
of plastic surgeons. Photographs and videos capturing sensitive anatomy and operative procedures in a sometimes casual manner render these posts potentially unprofessional and disrespectful, which violates the American Society of Plastic Surgeons Code of Ethics mandate to always use respectful language and images. Although the Social Media Task Force was established by the American Society of Plastic Surgeons in 2015 to promote responsible social media use, the American Society of Plastic Surgeons Code of Ethics still does not provide specific guidance on social media. However, the Code of Ethics was written to be a fluid and timeless document, much like the Constitution. As such, terms such as “electronic media” appear in the Code of Ethics, which necessarily includes the realm of social media, instead of referring to specific social media platforms. Furthermore, aside from enumerating social media’s many benefits, the plastic surgery literature does not adequately address what constitutes both professional and ethical conduct on social media. As such, we hypothesized that the surgical literature would provide generalized maxims on the appropriate use of social media without specifically defining professional content. To test our hypothesis, we performed a rigorous review of the literature to assess published recommendations from all surgical specialties for the professional use of social media. Based on our review of included articles, we discuss the potential implementation of professional society guidelines, and strategies for equipping plastic surgeons to use social media effectively, safely, and professionally.

METHODS

We ran comprehensive literature searches in Ovid MEDLINE, Ovid MEDLINE In-Process & Other Non-Indexed Citations, Ovid MEDLINE Epub Ahead of Print, Embase.com, and Cochrane Central Register of Controlled Trials on January 18, 2017. Each search consisted of a combination of controlled terms (Medical Subject Headings in Ovid and Cochrane; Emtree in Embase) and title and abstract keywords for social media and professionalism concepts. A preidentified set of five key articles were used to generate relevant search terms and to test the effectiveness of the searches. To minimize the possibility of missed studies, we supplemented the comprehensive database searches with a manual search of the three highest impact plastic surgery journals over a 10-month period (ending in October of 2017). Duplicates were removed in Endnote X6. The reproducible searches for all databases are available at DOI:10.7302/Z2VH5M1H.

Two authors (K.G.B. and N.L.B.) independently screened all titles and abstracts in DistillerSR. For inclusion, studies had to relate to clinical medicine, direct patient care, and the physician-patient relationship. Studies meeting these criteria underwent full-text review. The same criteria were used for inclusion at this stage, with the addition that each study relates to social media, professionalism, and surgery. Disagreements at both stages were resolved through discussion. The screening questions and decision data are available at DOI:10.7302/Z2VH5M1H.

RESULTS

The search strategy yielded 954 articles (Fig. 1). Title/abstract review was performed using the three selected questions as mentioned in the Methods section. After review and subsequent resolution of conflicts, 353 articles remained. After full-text review and resolution of conflicts, 28 articles were selected for inclusion (Table 1).1,6,19 Nine articles were also included from manual review of articles published by plastic surgery journals with the three highest impact factors (Plastic and Reconstructive Surgery, Journal of Plastic, Reconstructive & Aesthetic Surgery, and Aesthetic Surgery Journal) (Table 2).24,29,36

Of the articles retrieved by the search strategy, 10 were related to appropriate social media use in urology, eight in general surgery, six in plastic surgery, three in orthopedic surgery, and one in vascular surgery. An additional article was included because of its extensive discussion regarding the ethics of clinical and surgical photography in social media, and is summarized with the plastic surgery literature. All articles were written between 2010 and 2017.

Urology

The urology literature explored both positive and negative aspects of social media use in surgical practice, more so than other specialties. Recommendations included following professional society guidelines (if they exist),1,6 guarding patient confidentiality,6,19 declaring conflicts of interest,1 avoiding direct contact with patients online,19 considering a potentially infinite audience,19 and remembering that one’s online posts are permanent.1,6,19 Another article recommended creating separate personal and professional accounts and encouraged the use of disclaimers—that the
information provided does not substitute for a surgical consultation.\textsuperscript{19} Guidelines provided by the American Urological Association include the following: (1) be professional, (2) protect confidentiality, (3) allow for interaction, (4) be courteous, (5) exercise discretion, (6) support the American Urological Association’s identity, and (7) be thoughtful.\textsuperscript{36} The European Association of Urology has developed specific guidelines as well, encouraging clinicians to establish a professional identity in line with career goals, assume that anything posted is permanent, maintain clear limits with patients, refrain from self-promotion, and not accept friend requests from patients.\textsuperscript{16} The British Journal of Urology International also suggests users identify themselves as physicians, state that views are not necessarily those of one’s institution, alert colleagues if their posts are inappropriate, and strive for accuracy.\textsuperscript{5} Finally, Katz suggests that guidelines alone are likely less effective than actively teaching physicians and trainees what constitutes professional online conduct.\textsuperscript{14}

**General and Vascular Surgery**

Several articles exist in the general surgery literature. A survey study concluded that program
### Table 1. Summary of Articles Included in the Literature Review

<table>
<thead>
<tr>
<th>Reference</th>
<th>Surgical Specialty Discussed</th>
<th>Article Objectives</th>
<th>Journal</th>
<th>Conclusions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Landman et al., 2010</td>
<td>General surgery</td>
<td>To assess use of social media by faculty and residents at one program and to present guidelines</td>
<td><em>Journal of Surgical Education</em></td>
<td>Understand institutional policies, educate faculty/residents on policies, appoint department representative to manage social media; monitor your online presence, understand privacy settings, remember audience, maintain boundaries, be aware of post permanence</td>
</tr>
<tr>
<td>Patel et al., 2011</td>
<td>Plastic surgery</td>
<td>To discuss ethical issues when using social media for marketing</td>
<td><em>Plastic and Reconstructive Surgery</em></td>
<td>Overlap between work and play can compromise patient-physician relationship</td>
</tr>
<tr>
<td>Wong and Gupta, 2011</td>
<td>Plastic surgery</td>
<td>To compare traditional marketing methods with social media in plastic surgery</td>
<td><em>Aesthetic Surgery</em></td>
<td>Communication with patients on social media never replaces clinical evaluation; PHI must remain private</td>
</tr>
<tr>
<td>Azu et al., 2012</td>
<td>General surgery</td>
<td>To discuss impact of Internet use and social media and to provide recommendations for professional use</td>
<td><em>The American Journal of Surgery</em></td>
<td>Maintaining digital identity is important; physicians need to monitor online presence; profiles should not contain religious or political preferences</td>
</tr>
<tr>
<td>Lifchez et al., 2012</td>
<td>Plastic surgery</td>
<td>To review laws governing online communication and to discuss professional behavior online</td>
<td><em>Journal of Hand Surgery</em></td>
<td>Do not start doctor-patient relationship online; posts may be disseminated without your knowledge; user has full responsibility for posted content; adhere to HIPAA; OCR can investigate in absence of complaint</td>
</tr>
<tr>
<td>Vardanian et al., 2012</td>
<td>Plastic surgery</td>
<td>To evaluate trends of social media use among practicing plastic surgeons</td>
<td><em>Plastic and Reconstructive Surgery</em></td>
<td>One-third of plastic surgeons limit social media use out of concern for patient confidentiality; 25% feel governing bodies should regulate social media content</td>
</tr>
<tr>
<td>Devon, 2013</td>
<td>General surgery</td>
<td>To discuss ethics of posting mission trip photos on social media</td>
<td><em>Journal of the American Medical Association</em></td>
<td>Establish guidelines before mission trips, obtain consent from international patients</td>
</tr>
<tr>
<td>Indes et al., 2013</td>
<td>Vascular surgery</td>
<td>To review applications of social media in vascular surgery and limitations of use</td>
<td><em>Journal of Vascular Surgery</em></td>
<td>Educate patients that social media does not replace phone calls and appointments; avoid inappropriate contact with patients; start with professional website, then provide corresponding link in social media profile; start with only one social media platform; use disclaimers</td>
</tr>
<tr>
<td>Workman and Gupta, 2013</td>
<td>Plastic surgery</td>
<td>To evaluate smartphone apps useful to plastic surgeons</td>
<td><em>Aesthetic Surgery Journal</em></td>
<td>Advancing technology requires scrutiny of new marketing strategies; follow professional society codes of ethics</td>
</tr>
<tr>
<td>Katz, 2014</td>
<td>Urology</td>
<td>To discuss the EAU guidelines</td>
<td><em>European Urology</em></td>
<td>Physicians held to higher standard; guidelines helpful but not as effective as actively teaching trainees online professionalism; Remember professional and confidentiality standards; Twitter is open environment seen by anyone; identify yourself as a physician; maintain boundaries</td>
</tr>
<tr>
<td>Loeb et al., 2014</td>
<td>Urology</td>
<td>To review benefits of social media collaboration and journal clubs</td>
<td><em>European Urology</em></td>
<td>Adherence to proposed guidelines allow for engagement with minimal risk</td>
</tr>
<tr>
<td>Murphy et al., 2014</td>
<td>Urology</td>
<td>To discuss BJUI social media guidelines</td>
<td><em>British Journal of Urology</em></td>
<td>Protect doctor-patient relationship, consider context, represent yourself only, use caution if mixing personal and professional, assume permanence of posts, maintain limits with patients, refrain from self-promotion</td>
</tr>
<tr>
<td>Roupret et al., 2014</td>
<td>Urology</td>
<td>To discuss benefits and risks of social media and recommendations of the EAU</td>
<td><em>European Urology</em></td>
<td>Be aware of intent and hierarchy of doctor-patient relationship; stay up-to-date on social media platform terms of use</td>
</tr>
<tr>
<td>Adams et al., 2015</td>
<td>General surgery</td>
<td>To use a case study to determine ethical issues surrounding use of social media in health care</td>
<td><em>Cambridge Quarterly of Healthcare Ethics</em></td>
<td>Be aware of potential dangers; use highest privacy settings; establish professional and personal accounts; maintain boundaries with patients; avoid texting/e-mailing patients about medical concerns; actively manage one’s online presence; avoiding social media out of fear is not the solution</td>
</tr>
<tr>
<td>Azoury et al., 2015</td>
<td>General surgery</td>
<td>To review benefits of social media, its potential threat to professionalism, and American Medical Association guidelines</td>
<td><em>Bulletin of the American College of Surgeons</em></td>
<td>(Continued)</td>
</tr>
<tr>
<td>Reference</td>
<td>Surgical Specialty Discussed</td>
<td>Article Objectives</td>
<td>Journal</td>
<td>Conclusions</td>
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<tr>
<td>Borgmann et al., 2015</td>
<td>Urology</td>
<td>To determine impact of Twitter on practice, research, and activities</td>
<td>Canadian Urology Association Journal Urology Practice</td>
<td>Follow professional society (EAU, BJUI) guidelines</td>
</tr>
<tr>
<td>Ehlert, 2015</td>
<td>Urology</td>
<td>To review use, risks, and platforms of social media</td>
<td>British Journal of Urology International Current Reviews in Musculoskeletal Medicine</td>
<td>Online content is permanent, separate accounts does not eliminate risk, audience is infinite, avoid direct contact with patients, use disclaimers</td>
</tr>
<tr>
<td>Fuoco and Leveridge, 2015</td>
<td>Orthopedic surgery</td>
<td>To understand practices and attitudes of Canadian urologists regarding social media</td>
<td>To explore opportunities for social media use and relevant ethical concerns</td>
<td>Social media should be used for collaboration, not patient interactions</td>
</tr>
<tr>
<td>Kodadek, 2015</td>
<td>General surgery</td>
<td>To discuss risks of social media and consequences of misuse</td>
<td>Bulletin of the American College of Surgeons journal of Clinical Urology</td>
<td>Adhere to HIPAA, follow institutional policies, avoid communicating PHI over social media, use disclaimers, do not engage patients in social relationships, consent to publish patient information, separate personal and professional accounts</td>
</tr>
<tr>
<td>Modgil et al., 2015</td>
<td>Urology</td>
<td>To review the concept of social media, opportunities for use in urology, and responsible use</td>
<td>To measure effectiveness of case-based sessions for training residents in professional use of social media</td>
<td>Informed consent mandatory for publishing clinical images, social media publication only if consent obtained, consent process must disclose permanence of social media posts, providers should moderate comments</td>
</tr>
<tr>
<td>Mohiuddin et al., 2015</td>
<td>General surgery</td>
<td>To measure effectiveness of case-based sessions for training residents in professional use of social media</td>
<td>Indian Journal of Surgery</td>
<td>Follow professional society guidelines; recognize posting as public and permanent; declare COI; avoid direct contact with patients on social media</td>
</tr>
<tr>
<td>Palacios-Gonzalez, 2015</td>
<td>Discussed with plastic surgery literature</td>
<td>To determine whether consent required for publication of patient images, whether social media is adequate place for images to be displayed, and whether special considerations should be taken into account for social media</td>
<td>Medicine, Health Care, and Philosophy</td>
<td>Residents interested in changing specific use of social media after sessions; sessions made residents more aware of social media’s impact on career</td>
</tr>
<tr>
<td>Langenfeld et al., 2016</td>
<td>General surgery</td>
<td>To evaluate program directors’ approach to teaching online professionalism</td>
<td>Journal of Surgical Education</td>
<td>Online information is permanent; program directors should lead by example</td>
</tr>
<tr>
<td>Mata et al., 2016</td>
<td>Urology</td>
<td>To discuss goals of social media, ethical considerations, and ways to have a successful online presence</td>
<td>Urology</td>
<td>Develop a digital identity before someone else does; follow professional society guidelines; maintain professionalism; guard patient confidentiality; posts are permanent</td>
</tr>
<tr>
<td>McLawhorn et al., 2016</td>
<td>Orthopedic surgery</td>
<td>To review state of social media use in orthopedic surgery and unique practice risks</td>
<td>Current Reviews in Musculoskeletal Medicine</td>
<td>Keep personal and professional profiles separate; keep medical advice general; always use disclaimers; follow professional society guidelines; monitor online presence; avoid starting doctor-patient relationship online</td>
</tr>
<tr>
<td>Rivas et al., 2016</td>
<td>Urology</td>
<td>To review opportunities and appropriate use of social media in urology</td>
<td>Central European Journal of Urology</td>
<td>Be aware of risks and follow professional society guidelines</td>
</tr>
<tr>
<td>Duyumus et al., 2017</td>
<td>Orthopedic surgery</td>
<td>To determine prevalence of social media use among orthopedic surgeons and its effects on physician-patient communication</td>
<td>Journal of Clinical Orthopaedics and Trauma</td>
<td>Be aware that content can be found despite privacy settings; distinct difference between medical and social media cultures</td>
</tr>
</tbody>
</table>

PHI, protected health information; HIPAA, Health Insurance Portability and Accountability Act of 1996; OCR, Office of Civil Rights; EAU, European Association of Urology; BJUI, British Journal of Urology International; COI, conflict of interest.
Table 2. Summary of Articles Included after Manual Search of Top Three Plastic Surgery Journals

<table>
<thead>
<tr>
<th>Reference</th>
<th>Article Objectives</th>
<th>Journal</th>
<th>Conclusions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rohrich, 2017</td>
<td>To discuss impact of social media on academic and personal life in addition to risks</td>
<td>Plastic and Reconstructive Surgery</td>
<td>Keep professional and personal accounts separate; do not allow patients access to personal profiles; provide a measured responses to inflammatory comments; avoid sensationalism; cite articles to back up posts; consent for any patient video/photograph posted</td>
</tr>
<tr>
<td>Gould et al., 2017</td>
<td>To provide overview of social media and tips for use</td>
<td>Aesthetic Surgery Journal</td>
<td>Impressions made online may be indelible; protect patient privacy; avoid using as sounding board</td>
</tr>
<tr>
<td>Reissis et al., 2017</td>
<td>To discuss misuse of social media among plastic surgeons and future directions</td>
<td>Aesthetic Surgery Journal</td>
<td>Avoid glamorization of procedures; follow advertising guidelines for social media use; need clear professional society guidelines for social media activity</td>
</tr>
<tr>
<td>Liu, 2017</td>
<td>To discuss “A Primer on Social Media for Plastic Surgeons: What Do I Need to Know about Social Media and How Can It Help My Practice?”</td>
<td>Aesthetic Surgery Journal</td>
<td>Clarify inaccuracies online; poor judgment reflects on entire profession</td>
</tr>
<tr>
<td>Nazarian, 2017</td>
<td>To discuss “Advertising on Social Media: The Plastic Surgeon’s Prerogative”</td>
<td>Aesthetic Surgery Journal</td>
<td>Avoiding social media makes us obsolete; harness social media to educate and provide information on training and board certification</td>
</tr>
<tr>
<td>Dorfman et al., 2017</td>
<td>To provide an ethical analysis of patient videos on social media and guidelines for appropriate use</td>
<td>Plastic and Reconstructive Surgery</td>
<td>Obtain fully informed consent, recognizing evolving social media platform policies and permanence of online content; promote patient beneficence over surgeon’s interests</td>
</tr>
<tr>
<td>Furnas, 2017</td>
<td>To discuss “The Ethics of Sharing Plastic Surgery Videos on Social Media: Systematic Literature Review, Ethical Analysis, and Proposed Guidelines”</td>
<td>Plastic and Reconstructive Surgery</td>
<td>Many technological advances met with extreme criticism but later adopted; few unprofessional posts should not ruin potential good of social media</td>
</tr>
<tr>
<td>Lu et al., 2017</td>
<td>To discuss “The Ethics of Sharing Plastic Surgery Videos on Social Media: Systematic Literature Review, Ethical Analysis, and Proposed Guidelines”</td>
<td>Plastic and Reconstructive Surgery</td>
<td>Raw, graphic videos inappropriate for majority of Snapchat audience; easy to blur professional lines; patient compensation for posts inappropriate</td>
</tr>
<tr>
<td>Teven et al., 2017</td>
<td>To review possible negative consequences of posting patient material online and to suggest a specific consent form for social media use</td>
<td>Plastic and Reconstructive Surgery</td>
<td>Online content is permanent and difficult to remove; loss of copyright once images/videos posted; patients cannot revoke consent once material is posted; should have separate consent form for social media posts</td>
</tr>
</tbody>
</table>

Directors should be well versed in the professional use of social media so as to lead residents and colleagues by example. Adams et al. encouraged awareness of intent when posting, and staying up-to-date on social media platforms’ terms of use and privacy settings. They also suggested that patients may feel pressure to consent to online publication of photographs and videos secondary to the power differential inherent in the physician-patient relationship. Repeated themes included the avoidance of undermining the profession’s image, blurring patient/physician boundaries, and Health Insurance Portability and Accountability Act (HIPAA) of 1996 violations. Using the highest privacy settings, actively managing one’s online presence, knowing institutional policies, remembering potential audiences, and being conscious of posts’ permanence were emphasized as well. Azoury et al. reviewed the American Medical Association social media guidelines and purported that avoiding social media entirely was not the solution, especially with current cultural expectations. Consent for both clinical photography and photography on social media was particularly emphasized. The article from the vascular surgery literature warned that patients may rely on social media to communicate with physicians, rather than keeping appointments or returning phone calls. They also suggested starting with one social media platform and expanding according to the needs of one’s practice.

Orthopedic Surgery

Literature discussing social media use in orthopedic surgery similarly recommended that clinicians keep personal and professional profiles separate, and provide medical advice of a general nature, not substituting for a clinical encounter.
Following professional society guidelines was advised. McLawhorn et al. also warned that physician-patient relationships are easily initiated online if precautions are not taken, and should be actively avoided. Another article reminded readers that all online content is easily found, and social media users should bear this in mind. Further recommendations included following institutional policies, avoiding communication of protected health information over social media, using disclaimers, avoiding social relationships with patients, obtaining consent, and separating personal and professional accounts.

**Plastic Surgery**

In the plastic surgery literature, the importance of consent for publication of both identifiable and deidentified material on social media was reiterated. Given the unique risks of social media, a consent form specific to social media posts should be developed. In addition, the initiation of doctor-patient relationships on social media was discouraged, as were interactions that could constitute patient care. Protecting patient confidentiality, maintaining boundaries, and knowing the potential for limitless dissemination and permanence of content were recurring themes as well. Separating professional and personal accounts, avoiding sensationalism, and monitoring one’s online presence was advised. Advertising guidelines of the American Society of Plastic Surgeons and American Board of Plastic Surgery should be applied to social media use, revisiting these guidelines and amending them with social media in mind as needed.

More recently, Dorfman et al. performed an ethical analysis of posting patient videos on social media, emphasizing the importance of fully informed consent, patient beneficence, and balancing competing interests between the patient and surgeon. An invited discussion by Furnas recalled the rapidity of previous cultural changes and the slower nature of ethical responses. Prior technological advances were met with extreme criticism, similar to some responses to social media, yet were eventually adopted. The few plastic surgeons who "cross ethical lines" should not ruin the potential good of social media for the rest of us. Lu et al. acknowledged the importance of addressing challenging ethical questions brought to light by plastic surgery videos on social media, and both discussions mentioned the development of a consent form specific to social media publication by the American Society of Plastic Surgeons, which is currently underway.

**DISCUSSION**

With the advent of Facebook in 2004, social media rapidly revolutionized culture and social engagement. Social media use in surgery has similarly allowed instantaneous online connections with colleagues, facilitating collaboration and propagation of important research findings. Surgeons across specialties use social media to educate patients about living a healthy lifestyle, screening guidelines, and treatment options. Social media platforms are used for online journal clubs and as channels for advocacy and career development. Vascular surgeons have even touted social media as a way to recruit patients for research studies. Finally, social media have become an important marketing and branding agent for plastic surgeons, who provide cosmetic procedures in an increasingly competitive market. A large percentage of patients are online, searching for information about surgeons and other patients’ experiences. Some surgeons feel (rightly so) that failing to meet them online renders us obsolete and may lead patients down a path toward less qualified “cosmetic surgeons.”

However, the use of social media by clinicians may invite significant risk if not used with caution. As mentioned previously, HIPAA violations still occur, sometimes by the posting of seemingly unidentifiable information. In addition, surgeons’ posts might be viewed as specific medical advice if appropriate disclaimers are not provided, leading to potentially litigious consequences. Surgeons may also begin online communication with patients, inadvertently beginning doctor-patient relationships outside the usual clinical encounter. These relationships are easily developed across state lines where physicians are not licensed with real legal implications. Furthermore, surgeons may assume the ear of a specific audience, but social media posts can reach an infinitely large audience with unanticipated views and beliefs. A large percentage of this audience is also young and likely immature. Twenty-three percent of Snapchat users are between the ages of 13 and 17 years, and 59 percent of Instagram users fall between the ages of 18 and 25 years. Even more troubling is that posts are irrevocable, with an infinite potential to offend others if we fail to exercise discernment regarding content. However, some social media content disappears after time, rendering activity difficult to regulate. Perhaps more problematic are the frequent attempts to provide content that is titillating and sensational. “Medutainment” was initially coined as a
term for educating medical students in such a way that information is more readily retained.\(^{45,46}\) In the context of social media, medutainment refers to the use of the surgeon-patient encounter as a source of entertainment for the public under the guise of medical education and degrades the fiduciary responsibility a surgeon has toward his or her patient. For example, a plastic surgeon posting about an intravaginal laser could easily provide information about the procedure and indications for treatment without posting a video of the probe being repeatedly inserted into a patient’s vagina. Embracing whatever means necessary to advertise without established standards for policing ourselves results in caveat emptor overriding our fundamental commitment to primum non nocere.

As members of a profession, we submit to a higher standard of behavior, and we have a responsibility both to the profession and to our patients.\(^ {48}\) As the culture evolves, new guidelines become necessary to preserve patients’ trust and protect public opinion.\(^ {42}\) The public has already demonstrated poor understanding of plastic surgery,\(^ {48}\) and sensationalist social media content will only serve to cause further confusion. Because other specialties have developed specific guidelines for the use of social media, it may prove beneficial to similarly consider additional recommendations for plastic surgeons engaged with social media.

As we evaluate the current use of social media in plastic surgery and consider the adoption of guidelines, several key principles must be considered. First, consent is necessary but not sufficient. A surgeon who posts a graphic video or photograph of a patient after obtaining consent may not have violated any laws, but this does not qualify the post as professional. One aspect of professionalism is the ability “to communicate and interact in a respectful and productive manner.”\(^ {49}\) As such, our social media activity should similarly be “respectful and productive.” To further develop the definition of professional social media use, the American Medical Association published guidelines in 2011. The last recommendation says that “physicians must recognize that actions online and content posted may negatively affect their reputations among patients and colleagues, may have consequences for their medical careers, and can undermine public trust in the medical profession.”\(^ {42}\) Furthermore, the Federation of State Medical Boards maintains the “authority to discipline physicians for unprofessional behavior relating to the inappropriate use of social networking media,” which includes inappropriate communication with patients, derogatory remarks about patients, or “use of the Internet for unprofessional behavior.”\(^ {50}\) Unfortunately, certain social media accounts have made it clear that a few plastic surgeons struggle to discern what constitutes respective, productive, and professional content.

As part of our professional duty, we must also recognize the physician-patient power differential. The father of peer review, Henry Beecher, noted that patients consent to almost anything a physician proposes simply out of trust.\(^ {50}\) We must guard against this by facilitating fully informed consent, disclosing that online content is irrevocable and can reach unanticipated audiences. Consent should be obtained for deidentified material as well, since the patient has trusted the surgeon to keep all information surrounding their care private. Furthermore, providing incentives to patients for allowing online publication of photographs and videos should be prohibited, which is in line with the Code of Ethics prohibition of promotions wherein the prize is a surgical procedure.

Notwithstanding the valuable recommendations offered by various surgical specialties, the literature was unable to clarify what defines a post as unprofessional. This may seem like common sense—as Supreme Court Justice Potter Stewart famously said, “I know it when I see it”—but various social media posts would suggest it is not. The standards for photography and advertising set forth by our professional societies should also govern social media activity. Applying these standards to social media content may also serve to distinguish board-certified plastic surgeons from other cosmetic “surgeons” on social media.\(^ {51}\) Furthermore, an emphasis on board certification and its importance could successfully replace sensational social media content while still maintaining a competitive edge. Context must be considered as well, as photographs of breasts or genitalia in a journal are not equivalent to mass viewing on social media. Prudence suggests erring toward a more conservative definition of professionalism on social media given the potentially infinite and impressionable audience. Moving forward, our specialty would benefit from evolving guidelines set forth by our professional societies, and a specific consent form for the publication of material on social media, which is currently being overseen by the American Society of Plastic Surgeons social media task force. Historically, when professionals have failed to self-regulate, it often falls to the attorneys, lawmakers, and governing bodies to intervene on behalf of the public. As a specialty, we would do well to address these issues before outside forces intervene. However,
the authors applaud the work that the American Society of Plastic Surgeons has done thus far to curb the small group of plastic surgeons who are using social media unprofessionally, and its commitment to disciplinary action in the Code of Ethics in response to unprofessional conduct.

While there are negative aspects of social media, it is imperative to adapt as the culture evolves to remain relevant to our patients and provide accurate information about plastic surgery procedures. Creating an online culture of transparency in surgery is possible while still maintaining professionalism, but we must provide clearer direction on how to accomplish this (Fig. 2). While maintaining relevance through professional social media activity, we must also protect patients from inaccurate information and false advertising. Board-certified plastic surgeons are woefully underrepresented in plastic surgery–related content on social media, which renders it difficult for patients to find credible resources and qualified surgeons and makes our online presence all the more critical. If we do not engage with patients online, the only available information will be from non–core practitioners. Therefore, the purpose of this article is not to discourage participation in social media but rather to subscribe to a higher standard of online professionalism.

Although our study’s strengths lie in its comprehensive search of the surgical literature, it is not without limitations. Given that ethical codes and guidelines are often found in professional society newsletters or other non–peer-reviewed publications, it is possible that more specific recommendations regarding professional social media use were missed. However, given the extensive body of literature on the use of social media and its recent uptake by surgeons, it is more likely that specific guidelines have yet to be developed.

CONCLUSIONS

Social media use is indispensable for many plastic surgeons. The various social media platforms offer tremendous opportunities for educating patients, collaborating with colleagues, advertising, and disseminating research findings. However, merely avoiding HIPAA violations is an infinitesimally small part of maintaining online professionalism. The recommendations provided must function as the beginning of a vitally

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**Potential Guidelines for Social Media Use among Plastic Surgeons**

1. Avoid all breaches of patient confidentiality. Review all photographs and videos for any identifying features, such as tattoos or birthmarks, as well as any medical documentation accidentally captured in the background of the photograph or video.
2. Obtain fully informed consent when posting patient information. Consent must include discussion of the permanence of online content and the lack of control over potential audiences.
3. Patient incentives for allowing posts of photographs and other PHI are prohibited.
4. Know and follow any institutional or departmental guidelines.
5. Do not establish the doctor-patient relationship online. Rather, encourage patients to discuss issues with their own surgeons.
6. Maintain separate personal and professional social media accounts.
7. Utilize society guidelines on photography and advertising to guide social media use.
8. Avoid employing sensationalism in all posts.

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**Fig. 2.** Potential guidelines for social media use among plastic surgeons. PHI, protected health information.
important discussion, and one that must continue
to evolve as technology and social media platforms
change. It is critical for leaders in plastic surgery
to proactively work toward a more concrete defi-
nition of online professionalism to maintain our
reputation and effectiveness long term.

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REFERENCES


The Patient–Doctor Relationship and Online Social Networks: Results of a National Survey

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BACKGROUND: The use of online social networks (OSNs) among physicians and physicians-in-training, the extent of patient–doctor interactions within OSNs, and attitudes among these groups toward use of OSNs is not well described.

OBJECTIVE: To quantify the use of OSNs, patient interactions within OSNs, and attitudes toward OSNs among medical students (MS), resident physicians (RP), and practicing physicians (PP) in the United States.

DESIGN/SETTING: A random, stratified mail survey was sent to 1004 MS, 1004 RP, and 1004 PP between February and May 2010.

MEASUREMENTS: Percentage of respondents reporting OSN use, the nature and frequency of use; percentage of respondents reporting friend requests by patients or patients’ family members, frequency of these requests, and whether or not they were accepted; attitudes toward physician use of OSNs and online patient interactions.

RESULTS: The overall response rate was 16.0% (19.8% MS, 14.3% RP, 14.1% PP). 93.5% of MS, 79.4% of RP, and 41.6% of PP reported usage of OSNs. PP were more likely to report having visited the profile of a patient or patient’s family member (MS 2.3%, RP 3.9%, PP 15.5%), and were more likely to have received friend requests from patients or their family members (MS 1.2%, RP 7.8%, PP 34.5%). A majority did not think it ethically acceptable to interact with patients within OSNs for either social (68.3%) or patient-care (68.0%) reasons. Almost half of respondents (48.7%) were pessimistic about the potential for OSNs to improve patient–doctor communication, and a majority (79%) expressed concerns about maintaining patient confidentiality.

CONCLUSION: Personal OSN use among physicians and physicians-in-training mirrors that of the general population. Patient–doctor interactions take place within OSNs, and are more typically initiated by patients than by physicians or physicians-in-training. A majority of respondents view these online interactions as ethically problematic.

KEY WORDS: doctor–patient relations; computer communication networks; professionalism; Internet; bioethics.
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INTRODUCTION

Online social networks (OSNs) are “spaces in the internet where users can create a profile and connect that profile to others (individuals or entities) to create a personal network.”1 There are multiple online social networks, but some of the most popular include Facebook, Twitter, MySpace, Friendster, and LinkedIn. Over the past several years, the rise in popularity of these networks has been dramatic. Facebook, the most popular online social network, boasts over 500 million users since its inception in 2004,2 and it recently surpassed Google as the most popular site on the internet.3 Among internet users aged 18–24, 75% of those online had profiles on OSNs as of 2008.1 The Pew Internet and American Life Project found that the use of social network sites among those age 18 or greater has increased from 8% of internet users in 2005 to 46% in 2009.4 OSNs are a new potential medium for interactions between physicians and patients that may present both opportunities and problems for patient–doctor communication.5 OSNs provide a forum within which a new form of purported professional indiscretions may take place, and a recent report suggested that OSNs have been a forum for lapses of professionalism among medical students.6 Among United States medical schools, 60% reported incidents of students posting unprofessional content online, and 38% of schools had developed disciplinary policies for handling inappropriate online content posted by students. Additionally, several recent reports have described patient–doctor interactions within OSNs.7–9 The ambiguous status of OSNs as they relate to medical interactions and the potential they present for altering fundamental aspects of the patient–doctor relationship have also prompted the formulation of proposed guidelines for physicians using OSNs.10,11
Currently, there are no studies that quantify the incidence of patient–doctor interactions within OSNs by practicing physicians and medical trainees. The goals of this study were to quantify the utilization patterns of OSNs by physicians, resident physicians, and medical students; to describe the frequency of patient–doctor interactions within these networks; and to evaluate attitudes toward such interactions among physicians and physicians-in-training.

METHODS

Study Sample

We conducted a random, stratified mail survey of a cohort of practicing physicians (PP), resident physicians (RP), and medical students (MS) in the United States. The source population list was obtained from a licensee of the American Medical Association (AMA) Masterfile (Direct Medical Data, Des Plaines, IL). The AMA Masterfile is recognized as one of the most complete source lists of licensed physicians and medical students in the United States. We utilized the mail survey format because the list of mailing addresses for potential participants is the most accurate and complete contact data contained in the AMA Masterfile. Additionally, we wanted to capture the attitudes of both users and nonusers of online technologies. Because the utilization rates of OSNs and patient interaction data for these populations has not been previously studied, there were no existing data with which to perform power calculations. Based upon previously published data regarding physician response rates to surveys, the expected response rate was 25%. It was felt that this would provide sufficient data for reasonable estimates of proportions, based on the survey responses. This study was approved by the joint Indiana University–Purdue University Indianapolis/Clarian Health System institutional review board.

Survey

The survey was designed by the study team based on the existing literature and guided by research questions. The survey instrument was then piloted among ten resident and practicing physicians, and underwent iterative revision by members of the study team.

The survey instrument examined four content areas: attitudes toward online social networks, personal utilization patterns of online social networks, patient interaction experiences within online social networks, and demographic data (the full survey is available as an appendix online). Most response options were categorical. Questions regarding physician attitudes toward OSNs and their role in the patient–doctor relationship utilized a 5-point Likert scale (strongly disagree, disagree, neutral, agree, strongly agree).

Demographic data collected included age, year of medical school graduation (or anticipated medical school graduation), medical specialty, self-reported practice type (academic, private practice, mixed), self-reported practice setting (urban, rural, suburban), and gender.

Utilization data included whether or not the respondent used or had ever used OSNs, the frequency of use, which OSNs were used, type of use (personal vs. professional), and privacy settings of respondents’ own personal OSN profile.

The survey was designed to assess experiences of online patient interactions. It included questions regarding whether or not participants had visited the personal OSN profile of a patient and the reason for any visits, and whether they had been aware of patients viewing their personal profile. Additionally, respondents were asked whether they had ever asked for or received friend requests from patients or a patient’s family member within OSNs, how frequently, and whether or not these requests were accepted.

Additional questions were designed to assess attitudes toward OSN use and patient interactions. Participants were asked to describe the extent of their agreement with statements describing attitudes toward the ethical acceptability of visiting patient profiles, interacting with patients as part of patient care, and interacting with patients for social reasons. These questions also assessed respondents’ views of the potential of OSNs to improve patient–doctor communication, and the perceived likelihood that OSNs could be utilized without compromising patient confidentiality.

Data Collection

The survey questionnaire was sent to study subjects along with an addressed, stamped envelope in three sequential mailings. Surveys were completed anonymously, but were coded in order to track responses. Data collection took place from February through May of 2010. No incentives were offered for survey completion.

Statistical Methods

All demographic variables and questionnaire responses were summarized by professional status (medical student, resident physician, or practicing physician) using descriptive statistics (mean and standard deviation for continuous measures; count and percent for categorical measures). Comparisons across groups were performed using analysis of variance (ANOVA) and Fisher’s exact tests. Pairwise comparisons between groups were also performed using Fisher’s exact tests, using the Bonferroni correction to adjust significance levels for multiple post hoc comparisons. For these comparisons, p values < 0.017 were considered significant. For the summary of age for both OSN users and non-users the mean and corresponding 95% confidence interval was calculated.

RESULTS

Respondent Characteristics

Surveys were sent to 1004 subjects within each of the three subgroups, for a total of 3012 subjects queried. Surveys returned as undeliverable were excluded from the analysis (59/1004 for MS, 87/1004 for RP, 30/1004 for PP). There were a total of 455
survey responses out of 2836 delivered surveys (16.0% response rate), with response rates for each subgroup as follows: 187/945 (19.8%) for MS, 131/917 (14.3%) for RP, and 137/974 (14.1%) for PP. Respondents’ demographic data are reported in Table 1.

Usage Patterns

The utilization patterns of OSNs for each group of respondents are reported in Table 2. Medical students were more likely to report usage of OSNs than resident or practicing physicians (MS 93.5%, RP 79.4%, PP 41.6%; p<0.001 for all pairwise comparisons). Among all OSN users in this survey, Facebook was the most popular site (used by 99.4% of MS users, 96.2% of RP users, and 96.5% of PP users). Forty-six percent of MS, 50.0% of RP, and 50.9% of PP used more than one OSN. Medical students were more likely than practicing physicians to be daily users of OSNs (MS 46.6%, RP 38.8%, PP 24.6%; p=0.003 for MS vs. PP). A majority of all three groups reported using OSNs for personal use only (MS 95.9%, RP 97.0%, PP 95.0%), and very few respondents used OSNs for professional purposes (MS 4.1%, RP 3.0%, PP 10.1%). Most respondents reported that their personal OSN privacy status was completely private (MS 63.2%, RP 68.4%, PP 48.1%). Less than half of respondents reported that their personal OSN profile contained only information they would be willing to share with patients (MS 42.4%, RP 41.4%, PP 49.1%). The plot of OSN usage by age, (Figure 1), shows OSN usage decreasing with increasing age in two of the three groups (RP and PP).

Patient–doctor Interactions within Online Social Networks

Practicing physicians were more likely to report having patient interactions within OSNs than either medical students or resident physicians (Table 3). Specifically, they were more likely to have visited the profile of a patient or patient’s family member within an OSN than either MS or RP (MS 2.3%, RP 3.9%, PP 15.5%; p<0.001 for MS vs. PP, p=0.014 for RP vs. PP). A larger proportion of PP reported being aware of a patient or patient’s family member visiting their own personal OSN profile (MS 1.2%, RP 2.3%, PP 5.8%; p=0.002 for MS vs. RP, p<0.001 for MS vs. PP, p=0.002 for PP vs. RP).

Significantly more practicing physicians reported receiving friend requests from patients or family members then either

Table 1. Respondent Characteristics

<table>
<thead>
<tr>
<th></th>
<th>Medical students (%)</th>
<th>Resident physicians (%)</th>
<th>Practicing physicians (%)</th>
<th>All respondents (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of respondents</td>
<td>187 (19.8)</td>
<td>131 (14.3)</td>
<td>137 (14.1)</td>
<td>455 (16.0)</td>
</tr>
<tr>
<td>(response rate)</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Primary practice type</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Academic</td>
<td>103 (58.1)</td>
<td>16 (11.8)</td>
<td>119 (44.4)</td>
<td></td>
</tr>
<tr>
<td>Private practice</td>
<td>4 (3.2)</td>
<td>90 (66.2)</td>
<td>94 (35.1)</td>
<td></td>
</tr>
<tr>
<td>Mix private/practice</td>
<td>13 (10.3)</td>
<td>17 (12.5)</td>
<td>30 (11.2)</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>6 (4.8)</td>
<td>13 (9.6)</td>
<td>19 (7.0)</td>
<td></td>
</tr>
<tr>
<td>Primary Practice Setting</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Urban</td>
<td>91 (71.7)</td>
<td>48 (35.8)</td>
<td>139 (51.9)</td>
<td></td>
</tr>
<tr>
<td>Suburban</td>
<td>31 (24.4)</td>
<td>58 (43.3)</td>
<td>89 (33.2)</td>
<td></td>
</tr>
<tr>
<td>Rural</td>
<td>5 (3.9)</td>
<td>28 (20.9)</td>
<td>33 (12.3)</td>
<td></td>
</tr>
<tr>
<td>Average Years in practice</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N/A</td>
<td>2.6</td>
<td>22.8</td>
<td>13.0</td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>99 (53.9)</td>
<td>65 (50.4)</td>
<td>56 (41.2)</td>
<td>220 (48.4)</td>
</tr>
<tr>
<td>Male</td>
<td>85 (46.2)</td>
<td>64 (49.6)</td>
<td>80 (58.8)</td>
<td>229 (51.6)</td>
</tr>
<tr>
<td>Average age (SD)</td>
<td>25.5 (2.7)</td>
<td>30.2 (3.4)</td>
<td>50.3 (12.7)</td>
<td>34.1 (12.9)</td>
</tr>
</tbody>
</table>

Table 2. Usage Patterns of Online Social Networks

<table>
<thead>
<tr>
<th>Has respondent ever used social networking sites?</th>
<th>n=186</th>
<th>n=131</th>
<th>n=137</th>
<th>n=454</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>174 (93.5)</td>
<td>104 (79.4)</td>
<td>57 (41.6)</td>
<td>335 (73.8)</td>
</tr>
<tr>
<td>No</td>
<td>12 (6.5)</td>
<td>27 (20.6)</td>
<td>80 (58.4)</td>
<td>119 (26.2)</td>
</tr>
<tr>
<td>If respondent is a user, which OSNs do they use?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Facebook</td>
<td>173 (99.4)</td>
<td>100 (96.2)</td>
<td>55 (96.5)</td>
<td>328 (97.9)</td>
</tr>
<tr>
<td>Twitter</td>
<td>27 (15.0)</td>
<td>10 (9.6)</td>
<td>8 (14.0)</td>
<td>45 (13.4)</td>
</tr>
<tr>
<td>MySpace</td>
<td>52 (29.9)</td>
<td>31 (29.8)</td>
<td>6 (10.5)</td>
<td>89 (26.6)</td>
</tr>
<tr>
<td>Friendster</td>
<td>13 (7.5)</td>
<td>15 (14.4)</td>
<td>1 (1.8)</td>
<td>29 (8.7)</td>
</tr>
<tr>
<td>LinkedIn</td>
<td>20 (11.5)</td>
<td>20 (19.2)</td>
<td>20 (35.1)</td>
<td>60 (17.9)</td>
</tr>
<tr>
<td>Other</td>
<td>5 (2.9)</td>
<td>4 (3.8)</td>
<td>3 (5.3)</td>
<td>12 (3.6)</td>
</tr>
<tr>
<td>If respondent is a user, how often do they use OSNs?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Daily</td>
<td>81 (46.6)</td>
<td>40 (38.8)</td>
<td>14 (24.6)</td>
<td>135 (40.4)</td>
</tr>
<tr>
<td>Weekly</td>
<td>70 (40.2)</td>
<td>40 (38.8)</td>
<td>21 (36.8)</td>
<td>131 (39.2)</td>
</tr>
<tr>
<td>Type of utilization</td>
<td>n=172</td>
<td>n=99</td>
<td>n=54</td>
<td>n=325</td>
</tr>
<tr>
<td>Personal use</td>
<td>165 (95.9)</td>
<td>96 (97.0)</td>
<td>48 (88.9)</td>
<td>309 (95.1)</td>
</tr>
<tr>
<td>Personal and professional use</td>
<td>7 (4.1)</td>
<td>3 (3.0)</td>
<td>4 (7.4)</td>
<td>14 (4.3)</td>
</tr>
<tr>
<td>Professional status of personal OSN</td>
<td>n=171</td>
<td>n=98</td>
<td>n=52</td>
<td>n=321</td>
</tr>
<tr>
<td>Completely public</td>
<td>1 (0.6)</td>
<td>2 (2.0)</td>
<td>2 (3.9)</td>
<td>5 (1.6)</td>
</tr>
<tr>
<td>Limited public access</td>
<td>58 (33.9)</td>
<td>26 (26.5)</td>
<td>23 (44.2)</td>
<td>107 (33.3)</td>
</tr>
<tr>
<td>Completely private</td>
<td>108 (63.2)</td>
<td>67 (68.4)</td>
<td>25 (48.1)</td>
<td>200 (62.3)</td>
</tr>
<tr>
<td>Don’t know</td>
<td>2 (1.2)</td>
<td>3 (3.1)</td>
<td>0 (0.0)</td>
<td>5 (1.6)</td>
</tr>
<tr>
<td>Other</td>
<td>2 (1.2)</td>
<td>0 (0.0)</td>
<td>2 (3.9)</td>
<td>4 (1.2)</td>
</tr>
<tr>
<td>I consider my social networking profile to be located in a public and openly viewable space.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strongly agree/agree</td>
<td>78 (45.3)</td>
<td>37 (37.4)</td>
<td>30 (55.6)</td>
<td>145 (44.6)</td>
</tr>
<tr>
<td>Neutral</td>
<td>11 (6.4)</td>
<td>4 (4.0)</td>
<td>4 (7.4)</td>
<td>19 (5.8)</td>
</tr>
<tr>
<td>Strongly disagree/disagree</td>
<td>82 (47.7)</td>
<td>56 (56.6)</td>
<td>20 (37.0)</td>
<td>158 (48.6)</td>
</tr>
<tr>
<td>My online social networking profile contains only information that I would be willing to share with patients.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strongly agree/agree</td>
<td>73 (42.4)</td>
<td>41 (41.4)</td>
<td>26 (49.1)</td>
<td>140 (43.2)</td>
</tr>
<tr>
<td>Neutral</td>
<td>17 (9.9)</td>
<td>3 (3.0)</td>
<td>7 (13.2)</td>
<td>27 (8.3)</td>
</tr>
<tr>
<td>Strongly disagree/disagree</td>
<td>80 (46.5)</td>
<td>55 (55.6)</td>
<td>20 (37.7)</td>
<td>155 (47.8)</td>
</tr>
</tbody>
</table>
resident physicians or medical students (MS 1.2%, RP 7.8%, PP 34.5%; \( p = 0.007 \) for MS vs. RP, \( p < 0.001 \) for MS vs. PP and RP vs. PP). Of those who had received friend requests, 58% of practicing physicians reported that they always replied “no” to the request, and 42% replied that they accepted them on a case-by-case basis. For those resident physicians who had received friend requests, 57% reported that they never accepted friend requests from patients or their families, and 43% reported that they accepted them on a case-by-case basis. Among medical students who reported having received friend requests from patients or family members of patients, all reported accepting them on a case-by-case basis. No respondents from any group reported that they always accepted friend requests. Very few respondents reported ever requesting friendship of a patient or patient’s family member (MS 0%, RP 1.0%, PP 5.3%; \( p = 0.015 \) for MS vs. PP). Overall, patients were more likely to request friendship with physicians within OSNs than vice versa (patient-initiated request 9.0%, physician-initiated request 1.2%; \( p < 0.001 \)).

Data for patient-initiated friend requests categorized by specialty is reported in Figure 2. Forty-two percent of family practitioners who use OSNs, 38% of obstetricians who use OSNs, and 27% of pediatricians who use OSNs had received friend requests from either a patient or a patient’s family member.

### Attitudes Toward OSNs

All survey respondents, whether or not they reported using OSNs, were asked questions about their attitudes toward physician use of OSNs (Table 4). There were no statistically significant differences among the three groups for any of the responses. More than half of the respondents (57.9%) found it ethically unacceptable to visit the profiles of patients on OSNs. Additionally, a majority did not agree that it was ethically acceptable to interact with patients on OSNs, either for social (68.3%) or patient-care (68.0%) reasons. Almost half of respondents (48.7%) reported that they did not think OSNs had potential for improving patient–doctor communication; 26.4% of respondents agreed that OSNs did have potential to improve patient–doctor communication; and 20.5% of respondents were neutral on this question. A majority of respondents (79.0%) did not think that communication with patients within OSNs could be safely accomplished without compromising patient confidentiality.

### DISCUSSION

The meteoric increase in the use of online social networks has led to a great deal of media and other coverage of the ways in which such online tools are changing human interaction, and several have focused on patient–doctor interactions. These anecdotal reports tend to speculate as to the frequency with which these exchanges are taking place and the positive and negative consequences of such interactions. Several...
Online social networking sites have potential for improving doctor-patient communication with patients within online social networking sites (OSNs). MacDonald et al. reported that 65% of recent medical school graduates in New Zealand reported using Facebook. Moubarak et al. suggested by these prior studies, although the percentage of students (94%) report using OSNs for personal use than is published case reports have described patient–doctor interactions within OSNs in the medical literature. To our knowledge, this is the first attempt to quantify on a national level physician and medical student use of OSNs and patient interactions therein. Although the sample size was low and limits the generalizability of findings, it provides novel information about the use of OSNs by medical professionals.

Our findings demonstrate that physicians and physicians-in-training use OSNs as much or more often than the general population. Additionally, medical students and resident physicians are more likely to use OSNs than practicing physicians, although this may simply be a artifact of the lower age among students and resident physicians. The frequency of patient–doctor interactions among practicing physicians is noteworthy. And finally, most physicians and physicians-in-training think it ethically unacceptable to interact with patients on OSNs, and are doubtful that such interactions could occur without compromising patient confidentiality.

Several recent studies have attempted to quantify medical student and resident use of OSNs. Thompson et al. describe that 44.5% of medical students and resident physicians at a single public medical school and its affiliated hospital use OSNs. MacDonald et al. reported that 65% of recent medical school graduates in New Zealand reported using Facebook. Moubarak et al. reported that 73% of residents and fellows utilize Facebook. Findings from the present study suggest that a significantly higher proportion of U.S. medical students (94%) report using OSNs for personal use than is suggested by these prior studies, although the percentage of resident users of OSNs (79.4%) is comparable to the Moubarak data. There are at least three possible explanations for the higher rates of use reported in this study. First, as noted above, the low response rate of our study leaves a potential for selection bias which may have skewed the responses in favor of users. However, both of the comparative studies were carried out in 2008, and usage of OSNs was likely less common at that time. Data from the Pew Internet & American Life Project demonstrate that usage of OSNs grew from 61% of aged 18–29 internet users in 2008 to 83% of internet users in January, 2010. Additionally, both of these studies estimated usage rates by cross-referencing class lists with Facebook pages, leaving the possibility that usage rates were underestimated.

The difference among the specialties with regards to the percentage of users who had received friend requests is interesting. Those specialties that are seen as having a more longitudinal interaction with patients, often revolving around the care of children (FP, OB/GYN, and pediatrics), were those with the most friend requests. While the low response rate precluded a comparison between the different specialties regarding their attitudes toward these interactions, this finding generates questions regarding whether or not there are differences in each of these specialties’ attitudes toward patient interactions within OSNs.

Several commentators have written from a theoretical perspective about the effects of the Internet and Web 2.0 technologies on the medical profession. For the most part, these have focused on the preponderance of easily searchable data on the Internet, professionalism, and the posting of potentially inappropriate material on various types of Web 2.0 formats, including YouTube, weblogs, and Twitter. The structure of OSNs are such that they can dramatically blur the line between public and private spaces. The relatively permanent nature of postings on such sites means that the control over information dissemination, once posted, differs significantly from a fleeting and local interaction within the hospital or outpatient office. Our study raises further questions about the nature of patient–doctor boundaries in the digital age. Physical disconnection may allow patients to

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Table 4. Attitudes Toward Online Social Networks

<table>
<thead>
<tr>
<th>It is ethically acceptable for physicians to visit the online profiles of patients within personal online social networking sites.</th>
<th>Medical Students (%)</th>
<th>Resident Physicians (%)</th>
<th>Practicing Physicians (%)</th>
<th>All respondents (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly agree/agree</td>
<td>44 (23.7)</td>
<td>25 (19.1)</td>
<td>30 (21.9)</td>
<td>99 (21.8)</td>
</tr>
<tr>
<td>Neutral</td>
<td>35 (18.8)</td>
<td>18 (13.7)</td>
<td>26 (19.0)</td>
<td>79 (17.4)</td>
</tr>
<tr>
<td>Strongly disagree/disagree</td>
<td>103 (55.4)</td>
<td>86 (65.6)</td>
<td>74 (54.0)</td>
<td>263 (57.9)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>It is ethically acceptable for physicians to interact e.g. exchange personal messages with patients within personal online social networking sites for social reasons.</th>
<th>Medical Students (%)</th>
<th>Resident Physicians (%)</th>
<th>Practicing Physicians (%)</th>
<th>All respondents (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly agree/agree</td>
<td>36 (19.4)</td>
<td>16 (12.2)</td>
<td>21 (15.3)</td>
<td>73 (16.1)</td>
</tr>
<tr>
<td>Neutral</td>
<td>31 (16.7)</td>
<td>16 (12.2)</td>
<td>15 (11.0)</td>
<td>62 (13.7)</td>
</tr>
<tr>
<td>Strongly disagree/disagree</td>
<td>117 (62.9)</td>
<td>97 (74.0)</td>
<td>96 (70.1)</td>
<td>310 (68.3)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Online social networking sites have potential for improving doctor-patient communication.</th>
<th>Medical Students (%)</th>
<th>Resident Physicians (%)</th>
<th>Practicing Physicians (%)</th>
<th>All respondents (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly agree/agree</td>
<td>52 (28.0)</td>
<td>39 (29.8)</td>
<td>29 (21.2)</td>
<td>120 (26.4)</td>
</tr>
<tr>
<td>Neutral</td>
<td>40 (21.5)</td>
<td>31 (23.7)</td>
<td>22 (16.1)</td>
<td>93 (20.5)</td>
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<tr>
<td>Strongly disagree/disagree</td>
<td>85 (45.7)</td>
<td>59 (45.0)</td>
<td>77 (56.2)</td>
<td>221 (48.7)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Communication with patients within online social networking sites can be safely accomplished without compromising patient confidentiality.</th>
<th>Medical Students (%)</th>
<th>Resident Physicians (%)</th>
<th>Practicing Physicians (%)</th>
<th>All respondents (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly agree/agree</td>
<td>24 (12.9)</td>
<td>18 (13.7)</td>
<td>8 (5.9)</td>
<td>50 (11.0)</td>
</tr>
<tr>
<td>Neutral</td>
<td>20 (10.8)</td>
<td>13 (9.9)</td>
<td>13 (9.6)</td>
<td>46 (10.2)</td>
</tr>
<tr>
<td>Strongly disagree/disagree</td>
<td>127 (68.3)</td>
<td>94 (74.0)</td>
<td>100 (73.0)</td>
<td>321 (70.9)</td>
</tr>
</tbody>
</table>
pursue virtual dual relationships with their physicians more readily than they would pursue real ones. The fact that 34% of practicing physicians in our sample report having received friend requests from patients supports the idea that many patients feel comfortable approaching with their physicians within OSNs.

Even among this self-selected sample of physician users of OSNs, our data suggest that most physicians do not feel comfortable interacting with patients within OSNs. While over one-third of practicing physicians had received a friend request from a patient, only 1.2% of respondents had initiated a friend request. Additionally, a substantial majority of physicians see patient interactions within OSNs, for any reason, as ethically unacceptable. Respondents also tended to be negative regarding the potential for OSNs to improve patient–doctor communication, and a great majority thought that interactions with patients in these venues posed significant risks to patient confidentiality.

Although a majority of respondents did not view patient–doctor interactions within OSNs as ethically acceptable, just over a third of respondents were either neutral or thought these interactions were ethically appropriate, and almost half (46.9%) were either neutral or thought that OSNs had potential for improving patient–doctor communication. This range of attitudes toward acceptability of these interactions highlights a lack of consensus regarding the normative stance that physicians and physicians-in-training hold toward such contact.

Since this survey was completed, the AMA has issued a policy statement entitled, “Professionalism in the use of social media.”11 This statement gives guidance regarding physician privacy, maintaining appropriate boundaries with patients within OSNs, the potential for real-life consequences regarding online professional lapses, and the responsibility to report unprofessional online actions of fellow physicians. Our study underscores the importance of these guidelines and demonstrates the need to separate personal use of OSNs from professional obligations and fiduciary duties. Given the frequency with which practicing physicians experience patient interactions within OSNs and the fact that there are a plurality of views regarding the ethical standing of such exchanges, there are three tangible recommendations for clinicians from our study. First, clinicians who utilize OSNs for interaction with patients should clearly delineate their professional from their social “digital footprint.”26 For this group, consistency in the policy toward these interactions will be imperative in order to avoid the impression of favoritism amongst patients. Second, clinicians who maintain a personal presence in OSNs should be cognizant that it is a forum for potential patient–doctor interactions and lapses in professional integrity.6 Finally, for those who feel compelled to share access with patients, closely policing one’s privacy status and profile content is imperative.

There are several limitations to this study. First, it is common that surveys of medical professionals frequently yield low response rates.12,27 and, as noted above, the response rate in this study significantly limits the generalizability of study findings. This limitation exposes the results to the possibility of self-selection bias. That is, users of OSNs may have responded to the survey at a higher rate than those who do not use them out of interest in the topic. This is especially possible given the remarkably high usage rates of medical student respondents. However, the usage rates of practicing physicians and training physicians are consistent with data from other recent poll-

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Prevalence of Internet and social media usage in orthopedic surgery

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Abstract

Prior studies in other specialties have shown that social networking and Internet usage has become an increasingly important means of patient communication and referral. The purpose of this study is to evaluate the prevalence of Internet or social media usage in new patients referred to a major academic orthopedics center and to identify new avenues to optimize patient recruitment and communication. New patients were surveyed (n=752) between December 2012 to January 2013 in a major academic orthopaedic center to complete a 15-item questionnaire including social media and Internet usage information. Data was collected for all orthopaedic sub-specialties and statistical analysis was performed. Fifty percent of patients use social networking sites, such as Facebook. Sports medicine patients tend to be higher social networking users (35.9%) relative to other services (9.8-17.9%) and was statistically higher when compared to the joint/tumor service (P<0.0001). Younger age was the biggest indicator predicting the use of social media. Patients that travelled between 120 to 180 miles from the hospital for their visits were significantly more likely to be social media users, as were patients that did research on their condition prior to their new patient appointment. We conclude that orthopedic patients who use social media/internet are more likely to be younger, researched their condition prior to their appointment and undergo a longer average day’s travel (120-180 miles) to see a physician. In an increasingly competitive market, surgeons with younger patient populations will need to utilize social networking and the Internet to capture new patient referrals.

Introduction

Social media and social networking on the Internet has revolutionized healthcare over the past ten years. There are over one billion Facebook users and 500 million members of Twitter worldwide.1 In the United States, 244 million people or about 80% of the population use the Internet for either work or social networking with approximately 158 million users of Facebook.2,3 Of this particular group, the average age is 37 years old and 61% are over the age of 35.1 A recent publication on social networking showed an increase of 43% in user membership from 2009 to 2010 and an average user spends 6.5 hours per week on social media site per week.2 In addition to social media, many innovative tools based on the Internet are used in hospitals, medical schools, and private clinics. These include patient education modules, online medical courses, electronic medical records, monitoring of patients status in the Intensive Care Unit (ICU),4,5 and other online resources to assist in the education of medical students and physicians.1 Historically, patients learned about physicians through primary care referrals and word of mouth; however, paths to physician identification today are much more widespread since the advent of the internet and the spike in social media outlets.4,5 Furthermore, communications between patients and physician have also shifted from the traditional telephone calls to emails, blogs, and internet-based methods.

While patients are known to research their own medical maladies, they also research their own physicians. The advent of websites like rateMD.com, healthgrades.com and vitals.com make physician searches and reviews easy. A negative patient review may be detrimental to a physician’s reputation and their overall ability to recruit new patients to the practice. Other medical specialties have investigated the impact of social media on patient recruitment, education and communication.14,15 Previous studies in orthopedic surgery have looked at the use of Internet in patient education and communication, but no study has investigated the Internet and social media’s role on physician selection by patients and stratified by orthopaedic specialty.

Since many areas in the United States are becoming highly saturated markets for orthopaedic surgeons and the competition for new patients are intense, we investigated specific reasons why patients arrive at a single academic center and how internet or social media usage may play a role in the process. We believe that in certain specialties, primary care referral is no longer the main reason why individuals arrive in clinic. This study intends to analyze the means by which new patients select their orthopaedic surgeon and the prevalence of social media/internet usage among orthopaedic patients. Through capitalizing upon popular avenues of physician selection, patients will have access to a greater array of physician options and accessible contact information. Our main objective is to determine the prevalence of social media and Internet usage in orthopaedic patients presenting for an initial visit. We hypothesized that social media and Internet usage will differ between the different orthopaedic specialties and patient ages. Furthermore, Internet and social media may influence a patient’s decision in their selection of orthopaedic surgeons.

Materials and Methods

All new patients seeing an orthopaedic surgeon at a single major tertiary referral academic institution were prospectively recruited from three clinic locations that are affiliated with the same major academic institution. Clinic settings included a hospital in a city set-
ting, one ambulatory care center in a town setting, and one outpatient facility in a suburban city location. Orthopedic surgeon specialties included: foot and ankle, hand, joints, oncology, shoulder and elbow, spine, sports medicine and trauma. Patients were not recruited if they were under the age of 18 or non-English speaking. All new patients were given the option to complete the 15-item voluntary questionnaire and no personal health information was recorded (Appendix). No randomization took place. Patients were recruited for a period of two months (December 2012 to January 2013).

Overall summary statistics were calculated in terms of means and standard deviations for continuous variables and frequencies and percentages for categorical. Group differences among continuous variables were evaluated using independent samples t-tests. Group differences for discrete variables were evaluated using chi-square or Fisher’s Exact Test. Unadjusted odds ratios (OR) and their respective 95% confidence intervals (95% CI) were calculated to assess the magnitude of the association.

A multivariable binary logistic regression model was then created to evaluate the adjusted associations of each potential explanatory variable and the likelihood of patients using social networking websites. Variables with a univariate significance level of 0.25 or less or those variables that were deemed to be relevant were eligible for inclusion in the analysis. Using a forward stepwise procedure, variables that failed to achieve a P value of 0.15 or below were removed from the final model. Because of the explanatory nature of the analyses, 0.15 was chosen as the threshold for retention in the final model; however, statistical significance was still set at P<0.05. For all regression models, adjusted odds (aOR) and their subsequent 95% confidence intervals were reported. All analyses were done using SPSS version 20.0 (SPSS Inc., Chicago, IL, USA).

Results

Of the 752 responses, there were 66% female and 34% male responses (Table 1). Responses were obtained from hand (142), sports medicine (303), foot and ankle (129), joints/tumor (95) and trauma (83) services (Figure 1A). Overall, 51% of all patients surveyed report using social networking sites such as Facebook or Twitter (Figure 1B). Of the patients that report not using social networking sites, 92% are over the age of 40. Joints/tumor patients most commonly had seen another orthopaedic surgeon prior to their visit (59%) and had prior surgery (42%). Most patients traveled under 60 miles and were referred by their primary care physicians. Between 18-26% of all patients used a physician review website before consultation. However, only 2% of all surveyed patients have actually posted a review onto a Physician Review website. Majority of the patients prefer communicating with their physician via the phone (68%) compared to email (32%). Independent associations found that sports medicine patients tend to be higher social networking users (35.9%) relative to other services (9.8-17.9%) and was statistically higher when compared to the joints/tumor service (P<0.0001) (Table 2).

The multivariate logistic regression model showed that the sports service was generally more likely to have social networking users with the exception of the foot/ankle service, however these differences were not statistically significant. The biggest indicator predicting social media usage in the orthopaedic population was age. The older the patient population, the less likely patients will use social networking sites (Table 3). Non-doctorate patients were more likely to be social media users compared to doctorate level individuals, but was not statistically significant. Patients that lived from 120 to 180 miles from the hospital were significantly more likely to be social media users, as were patients that did research on their condition prior to their new patient appointment.

Discussion

Overall, orthopaedic patients who use social media are more likely to be younger, researched their condition prior to their appointment and undergone an average day’s travel (120-180 miles) to see the orthopaedic physician. Our age findings support those of prior studies, which conclude that Internet and social networking users tend to be younger patients. Understanding patient population demographics is crucial for marketing optimization in the social networking and Internet realm. In particular, our study found that sports medicine patients tend to be the most computer savvy, which may in part be due to younger patient age. Physicians with younger

| Table 1. Demographics information of the patient population surveyed in our study (total number of responses 752). |
|-----------------|-----------------|
| Information     | N. (%)          |
| Age             |                 |
| Under 18        | 12 (1.6)        |
| 19-29           | 105 (14.0)      |
| 30-39           | 70 (9.3)        |
| 40-49           | 149 (19.8)      |
| 50-59           | 190 (25.3)      |
| 60-69           | 140 (18.6)      |
| 70+             | 86 (11.4)       |
| Sex             |                 |
| Male            | 271 (34)        |
| Female          | 481 (66)        |
| Level of education |            |
| Elementary school or junior high | 14 (1.9) |
| High school     | 207 (27.5)      |
| College graduate | 283 (37.6) |
| Professional/graduate school | 206 (27.4) |
| MD, DO, DDS, DMD, PhD | 42 (5.6) |
| Distance traveled to new patient appointment |                 |
| Less than 30 miles | 502 (66.8)   |
| 30-60 miles     | 147 (19.5)      |
| 60-120 miles    | 76 (10.1)       |
| 120-180 miles   | 13 (1.7)        |
| 180-240 miles   | 4 (0.53)        |
| Greater than 240 miles | 9 (1.2)  |
| Orthopedic surgery service |          |
| Foot and ankle  | 129 (17.2)      |
| Hand            | 142 (18.9)      |
| Joints/tumor    | 95 (12.6)       |
| Sports medicine | 303 (40.3)      |
| Trauma          | 83 (11.0)       |

Figure 1. A) Percentage of services surveyed within the orthopaedic department. B) Overall social media use in the entire patient population surveyed.
patient populations should take advantage of the numerous social media avenues to increase practice accessibility. Common methods of increasing Internet presence includes, the creation of a personal website, Facebook page, Twitter account, blogs and YouTube videos. In contrast, we found that joints patients, who had a higher average age, were significantly less involved with social networking sites. Arthroplasty surgeons in particular should continue to rely on word of mouth, primary care physician and insurance referrals to build a rigorous practice.

Increased access to medical education resources online is known to alter patient care due to the prevalence of unregulated medical information that is often inaccurate.21,22 Approximately 80% of patients will utilize the internet to obtain health information within their lifetime.5 Furthermore, Danquah et al. found that 85% of surgeons have experienced a patient bringing information to an appointment from the internet.14 In our study, patients that researched their condition prior to their appointment were also social media users. Surgeons should consider including a patient information and education section on a personal website or social networking page as a way to provide accurate, concise and easy to understand information about services offered by the physician and orthopaedic practice. Referencing a website with controlled information is one simple way to increase patient education and reduce time spent re-educating patients about a particular diagnosis or post-operative course on subsequent office visits.

Since patients are already known to research their condition prior to their appointment, there is also a growing trend for patients to research their surgeon prior to their appointment. The newest trend is in the use of physician rating websites (PRW) on the Internet. The primary objective of these sites is to allow patients an opportunity to discuss the physician’s quality of care and overall satisfaction using user-generated data. The advantage with these online rating systems is the ease of usage, availability, and the information maybe easier to understand for patients as this information is generated peer to peer. Up to 26% of our patients utilized a PRW prior to selecting their orthopaedic surgeon for a new patient appointment. However, less than 2% of the patients surveyed actually personally posted a review onto these Physician Review sites. In an analysis of online evaluation of physician rating websites in Germany, 107,148 patients performed 127,192 ratings of 53,585 physicians. Thirty-seven percent of all physicians were rated on the website by a patient population majority of females (60%). Female physicians had a significantly better rating than their male colleagues and older patients tend to give better ratings than younger patients. Furthermore, patients that had private insurance had much better ratings of physicians than the statutory health insurance.23 The authors concluded that due to the differences regarding the socio-demographic characteristics of both the patient and physician, it remains unclear if the ratings on the Internet from these PRW realistically reflect the quality of care delivered by the physician. Thus, with the highly unregulated nature of patient posts on various physician review websites, physicians must be cognizant of Internet content posted that is related to their name on a Google search. Creating a personal website with patient testimonials is a good example of a way to increase regulation of your personal reviews from patients on the Internet. Physicians can also recommend that patients post comments on physician review websites about their good experience with their appointment, surgery and office staff.

Patients who traveled 120-180 miles, which would be considered an average day’s travel to see their physician, were also social media users. In the major US cities, such as Boston, New York City or Los Angeles, that are highly saturated with many reputable hospitals, generating a patient population that extends beyond the immediate vicinity can be a crucial asset to a physician’s practice. Targeting a national and international patient population is made easy through the use of social media (Facebook, Twitter or YouTube) and other Internet tools (personal website). Physician marketing that focuses on specializing in a few primary surgeries will target specific patient populations, which may encourage patients to travel longer distances for an expert opinion.

Despite technological advances that enable patients’ access to endless information at their fingertips, most still prefer to communicate with the physician over the phone, instead of e-mail. This finding should remind us that patients most prefer a personalized approach to medicine, where a direct verbal communication between patient and physician exists. This type of personalized medicine cannot be achieved solely through the use of e-mail communication and value still remains in communication with patients directly. In a national survey evaluating the usage of Internet to com-

Table 2. Independent associations for patients that utilize social networking sites compared to those that do not (Do you use social networking websites such as Facebook or Twitter?).

<table>
<thead>
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<td>High school</td>
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<tr>
<td>Total</td>
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[Orthopedic Reviews 2014; 6:5483]
municate with health care providers, there was an increase from 7% of internet users to 10% between 2003 to 2005, respectively. Users that used internet to communicate with their health care providers had higher education, lived in a metro area, and reported poorer health status. Despite the large percentage of Internet users in the United States, most patients still communicate with their physicians through other means than the Internet. Furthermore, Hesse et al. reported that 62.4% of all patients in a national survey trusted their physicians for health information. However, only 10.9% of patients actually went to a physician to get health-related information while 48.6% went to the Internet first to research their conditions before seeing a physician. This further emphasizes the importance of posting accurate medical information onto the Internet that is supported with scientific evidence for patient education. The disadvantage of Internet or email communication is the risk of misinterpretations. All conversations should be documented in the patient’s electronic medical records. Furthermore, it is essential not to share identifiable patient information over the Internet or social media which will violate HIPPA policies.

There are several limitations to our study. First, this study surveyed patients only in a major tertiary referral academic medical center in a large urban city setting. If the location of the hospitals was to change to a rural setting or community medical center, our results may have been different. Second, different social medial outlets were grouped together (Facebook, Twitter, LinkedIn, etc.) as an indicator of social media usage. However, each of these sites has different purposes and is utilized differently by patients. We did not specifically ask each patient how each site influenced their overall decision in their visit to the orthopaedic surgeon. Instead, our study provides a general idea of how many patients seen in a major orthopaedic center use social media as part of their daily routine.

### Conclusions

Over 50% of all orthopaedic patients use social media or Internet for work or personal communication and up to 26% of all patients have seen or used a physician review site prior to their initial visit. Orthopedic patients who use social media/Internet are more likely to be younger, researched their condition prior to their appointment and undergo a longer average day’s travel (120-180 miles) to see a physician. Despite the increased social media usage, most orthopaedic patients still prefer telephone communication with their physicians. Overall, given the high prevalence of social media and Internet usage in young patients, orthopaedic surgeons with younger patient populations (Sports Medicine) may need to utilize social networking and the Internet to capture new patient referrals.

| Table 3. Regression model based on patients that use social networking sites (Do you use social networking websites such as Facebook or Twitter?). |
|---------------------------------|-----------------|-----------------|-----------------|----------|
|                                  | Adjusted OR     | Lower 95% CI    | Upper 95% CI    | P        |
| Constant                        | 0.08            | 0.000           |                 |          |
| Service                         |                 |                 |                 |          |
| Foot/ankle                      | 1.29            | 0.79            | 2.10            | 0.306    |
| Hand                            | 0.98            | 0.71            | 1.40            | 0.350    |
| Joints/tumor                    | 0.77            | 0.61            | 0.99            | 0.890    |
| Spine/trauma                    | 0.87            | 0.43            | 1.63            | 0.362    |
| Sports                          | Reference       | 0.48            | 1.57            | 0.635    |
|                                  |                 |                 |                 |          |
| Age                             |                 |                 |                 |          |
| <18                             | 33.15           | 6.08            | 180.66          | 0.000    |
| 18-29                           | 46.86           | 18.70           | 117.40          | 0.000    |
| 30-39                           | 14.87           | 6.47            | 34.19           | 0.000    |
| 40-49                           | 4.78            | 2.42            | 9.42            | 0.000    |
| 50-59                           | 2.76            | 1.43            | 5.31            | 0.000    |
| 60-69                           | 1.51            | 0.76            | 3.01            | 0.002    |
| >70                             | Reference       | -               | 0.237           |          |
| Female sex                      | 1.88            | 1.29            | 2.73            | 0.001    |
| Education                       |                 |                 |                 |          |
| Less than High school           | 1.85            | 0.39            | 8.78            | 0.438    |
| High school                     | 1.72            | 0.75            | 3.95            | 0.199    |
| College graduate                | 1.64            | 0.83            | 4.05            | 0.131    |
| Professional/graduate school    | 2.14            | 0.96            | 4.79            | 0.064    |
| MD, DO, DDS, DMD, PhD           | Reference       | -               | -               |          |
| Distance traveled               |                 |                 |                 |          |
| Greater than 240 miles          | 1.03            | 0.18            | 5.94            | 0.98     |
| 180-240 miles                   | 0.46            | 0.05            | 4.43            | 0.50     |
| 120-180 miles                   | 4.08            | 0.96            | 17.29           | 0.06     |
| 60-120 miles                    | 0.57            | 0.32            | 1.04            | 0.07     |
| 30-60 miles                     | 0.61            | 0.39            | 0.96            | 0.03     |
| Less than 30 miles              | Reference       | -               | -               |          |
| Did prior research              | 2.18            | 1.52            | 3.13            | 0.000    |

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Research Article

Evaluating the Online Presence of Orthopaedic Surgeons

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Ariana N. Mora, BA
Kyra A. Benavent, BS
Philip E. Blazar, MD

Abstract

Purpose: The objective of this study was to evaluate and characterize the professional and educational information provided online by US orthopaedic surgeons.

Methods: The American Academy of Orthopaedic Surgeons (AAOS) membership directory was used to randomly select 1% of physicians from each state. Name, sex, state, and date of membership were recorded from the AAOS online public membership directory. A Google search was conducted for each member of this cohort. Specific data gathered from each website included practice type, physician subspecialty, website focus (commercial or educational), and the quality of patient education presented were evaluated.

Results: The cohort consisted of 246 orthopaedic surgeons, including 93.1% men and 6.9% women. The AAOS membership duration was less than 10 years for 48.0% of surgeons, 11 to 20 years for 28.9% of surgeons, and greater than 20 years for 23.2% of surgeons. At least one online profile was found for 94.3% of orthopaedic surgeons. Most surgeons, 66.8%, were identified as belonging to a group or solo private practice, although nearly half (48.7%) of all surgeons were also based out of a hospital. Most website profiles, 62.5%, were found to have an intermediate level of educational content, whereas 18.1% of website profiles did not provide any.

Discussion: The clear majority of US-based orthopaedic surgeons have a professional presence online. Focus on social media or educational content differs regionally, but not based on years in practice.

Level of Evidence: Level V, prognostic

It is estimated by the United Nations that in 2016, 76% of the US population (total of 245 million individuals) had internet access, which provides opportunity for medical professionals to represent themselves professionally and provide education for patients.1

Online physician-patient interaction has significant potential to benefit patients and doctors. This allows consumers to educate themselves about their medical conditions from reliable sources. Patients may choose to review the professional qualifications of multiple healthcare providers before an initial in-person consultation. Although the ultimate diagnosis and management of the patient’s condition depends on an evaluation in the physician’s office, having information easily accessible on the Internet for reference both before and after the office visit, may increase patient compliance, satisfaction, and shared decision-making.
In addition, websites provide a platform for physicians to present their professional qualifications and patient testimonials for marketing purposes. However, very little has been published on the professional online presence of orthopaedic surgeons.

The objective of this study was to (1) evaluate and characterize the professional and educational information provided online by US orthopaedic surgeons and (2) evaluate the differences in provider online presence based on demographics. Our null hypothesis was that no differences were observed in the online presence or content among different groups of orthopaedic surgeons.

**Methods**

The American Academy of Orthopaedic Surgeons (AAOS) online public membership directory was used to identify the physician cohort. For each of the 50 US states, as well as the District of Columbia, 1% of the AAOS members were randomly selected using a random number generator. Emeritus members and international members were excluded from this study.

Information was gathered from each selected physician’s profile on the AAOS online public membership directory. Name, sex, zip code, membership category (active, candidate, or associate), and date of initial membership were recorded, with years of AAOS membership acting as a proxy for years in practice. Website links listed in each AAOS surgeon’s membership entry were also recorded.

In June and July of 2017, the Internet presence of the selected physicians was evaluated using two methods. First, the AAOS membership directory entry was searched for links to AAOS-sponsored websites or other professional websites. Second, an online Google search was conducted for each member of our orthopaedic surgeon cohort through the search terms, “First name Last name MD.” If a profile pertaining to the appropriate surgeon was not identified within the first two pages of the Google search results, the keyword “orthopaedic” was added, followed by the state in which the surgeon practiced. If a website for that physician was still not found, the physician was deemed not to have a professional website. For every selected orthopaedic surgeon, the data on each website were examined and characterized by the parameters below. If one physician had multiple professional websites, the content was consolidated as a composite description of the surgeon’s online profile; however, only the first three listed professional websites were included.

Specific data gathered from each website included practice type (eg, hospital, group, or solo practice), physician subspecialty, residency program, and completion year. The presence or absence of information regarding board certification, memberships in professional societies, awards, publications, presentations, patient testimonials, and disclosure of financial conflicts of interest was determined. For surgeons who had more than one subspecialty, their primary subspecialty was used in the analysis. The educational content of the website and ability to contact the healthcare providers online through the website or linked social media pages was also recorded. The quality of patient education presented on each website was scored from 0 to 3 with a de novo categorical classification. This classification was based on the presence or absence of detailed descriptions of common injuries, printable PDFs with exercises or explanations about common conditions, videos explaining conditions or management of these conditions, or provision of website links to other resources for more medical information. The highest score for patient education achieved was recorded for surgeons with multiple professional websites. Website focus, either commercial or commercial-educational combination, was classified using the criteria described in Table 1.

To better analyze regional differences among orthopaedic surgeons, the country was divided into five geographic regions as delineated by the National Geographic Society: Northeast, Southeast, Southwest, Midwest, and West (Figure 1, A).

**Results**

**Demographics**

Our cohort consisted of 246 orthopaedic surgeons, including 229 (93.1%) men and 17 (6.9%) women, comparable with the 2016 AAOS census distribution. There were 211 (85.8%) active AAOS members, 29 (11.8%) candidate members, and 6 (2.4%) associate members. Geographic, subspecialty, age, and sex distributions are shown in Supplemental Table 1 (Supplemental Digital Content 1, http://links.lww.com/JAAOS/A350). Overall, 13 surgeons...
(5.2%) reported having two subspecialties. For analysis, the primary subspecialty was used.

Orthopaedic Surgeon Professional Profile Content

In total, 321 websites for 232 surgeons were identified and evaluated. At least one online profile was found for 232 (94.3%) orthopaedic surgeons. The vast majority (92.7%) of orthopaedic surgeons had one or more non-AAOS sites appear in Google search results. Few orthopaedic surgeons (26.8%) included direct links to either an independent or AAOS site through their AAOS membership directory entry. Of the 66 who did, 45 (68.2%) provided a link to their AAOS profile, 27 (40.9%) provided a link to an independent website and 11 (16.7%) provided both. Table 1 shows the categorization of the websites surveyed according to our classification. Most surgeons (155, 66.8%) self-identified as belonging to a group or solo private practice, and nearly half (113, 48.7%) of all surgeons reported a hospital affiliation (Figure 2).

Content of Online Presence

The content of physicians’ online presence was assessed (Table 2). Feedback or appointment requests were possible on 77.2% of websites. Links to professional social media accounts were found on 195 (84.1%) website profiles, almost exclusively group or hospital accounts; only 9 of the 321 examined websites were linked to multiple individual professional social media pages (Figure 3). Regionally, social media links for surgeons were present in 74% of profiles in the West and in 90.6% of profiles in the Southeast. By subspecialty training, all pediatric and oncologic surgeons, 93.8% of trauma surgeons, and 76.2% of spine surgeons included a link to at least one active social media site. All female surgeons included a social media link.
to their profile, whereas 82.8% of male profiles contained an active social media link.

**Website Educational Focus**

Educational content in nearly half of website profiles received a score of two or higher (Table 3). Ninety-nine surgeons (42.7%) provided educational videos, and 16 (6.9%) surgeons provided rehabilitation protocols. We assessed educational content across several demographic variables. For years in practice, more than 45% of profiles in each age bracket received patient education scores of 2 or 3. In each geographic region, 45% of profiles included educational videos, except for the West, where 64% of profiles received a score of 1 or lower (Figure 1, B). Subspecialties had some variation; spine surgeons had the highest percentage of profiles that achieved an educational score of 3 (38.1%), followed by hand and upper extremity surgeons (30.8%). Female surgeons’ website profiles had higher educational scores than male surgeons’ profiles, where more than 50% scored 2 or higher. Female surgeons’ profiles also included more educational videos than their male counterparts (75% compared with 40.3%).

**Discussion**

Patients increasingly rely on the Internet and social media to obtain information and make decisions about their health care. Duymus et al found that Internet usage affected the choice of hospital in 50.9% and choice of physician in 39.4%. The Internet and social media not only provide opportunities for marketing of practices but also are valuable tools for providing accurate educational content. Like other areas of medical care, musculoskeletal health information available online is frequently lacking validation or accuracy. Our data indicate that there has been a change in the educational content available on both physician and hospital orthopaedic websites.

From 2000 to 2004, several articles investigated the content and accuracy of websites of interest to orthopaedic patients. Rozental et al examined existing websites of 113 departments of orthopaedic surgery accredited for resident education and found that only 13 sites (11.5%) contained information on common orthopaedic conditions. In another study in 2004, Rozental et al compared the websites of academic orthopaedic surgery departments and private practices regarding the information present on common orthopaedic conditions, finding that only 11.5% of academic sites and 52% of private practice sites list information on these orthopaedic conditions. Bredjiklian et al evaluated the educational quality of websites and found that the search phrase “carpal tunnel syndrome” resulted in only 23% of sites authored by a physician.
or academic organization, whereas another 23% offered misleading or unconventional information. Our data demonstrate that significant change has occurred over the past decade, with an increasing prevalence of educational information on both hospital and private practice sites. In total, 212 private practice sites (group or personal) were examined, with only 42 (19.8%) of these not including information on common orthopaedic conditions. Of the 109 hospital sites considered, 71.6% provided at least one online method for patients to educate themselves about their conditions. Our study indicates that there is variation based on subspecialty, region and surgeon sex.

Overall, group practices and hospitals were much more likely to link to social media platforms compared with profiles on individual professional websites. Individual professional social media accounts were scarce (2.8%), but when present, they often came from a non-AAOS website. Many reasons have been previously reported for surgeons’ lack of professional social media presence. In a study on plastic surgeons published in 2011, Wheeler reported that many professionals did not think social media had business value (34%) or found it too complicated (11%), and half of the surveyed surgeons chose not to use social media because they considered it too time consuming to maintain.11 A study on emergency medicine specialists similarly showed that 41% of study subjects were not interested in professional use of social media.12 Other barriers previously cited include concerns about privacy, professional boundaries, and legal and/or ethical implications.12,13 Multiple studies indicate that younger physicians (ie, residents or early career physicians) use social media more frequently, and particularly for personal purposes.12-14 In addition, orthopaedic patients who are younger and with higher level of education are more likely to engage with their providers on social media.10 Further study may elucidate the barriers to use of social media among orthopaedic surgeons.

In comparison with other specialties, orthopaedic surgeons have been shown to use social media less...
frequently. In two studies specifically examining orthopaedic surgeons’ use of professional social media, websites were by far the most common with 82% to 95% of respondents maintaining a professional site.\textsuperscript{15,16} Although LinkedIn was the most popular social media site for professional profiles, social media use overall was highest on Facebook, followed by Twitter, Instagram, and then LinkedIn when also considering personal usage.\textsuperscript{17}

It is important to note, however, that most of the US population uses social media and many patients may search online for health information.\textsuperscript{9} Multiple studies have shown that people trust information received from health providers over other possible sources, indicating that there is a place and need for physician presence online.\textsuperscript{13,18} Moreover, increasing online presence can be beneficial for physicians; accurate health information has been shown to increase motivation and adherence to a treatment plan among patients.\textsuperscript{8,10,18} Other possible benefits include communicating with patients or other doctors, improving their reputation by increasing the amount of physician-controllable content online, and even enhancing clinical research.\textsuperscript{18}

This study has several limitations. First, all demographic information collected from each surgeon’s professional internet profiles was self-reported, including subspecialty. Second, although the AAOS provided information that was not self-reported, it is possible that years of membership in the AAOS may not be representative of years in practice but was chosen because of a lack of publicly available information on years in practice. Third, because most websites are managed by groups or hospitals, individual physicians may have limited control over their own profile and website content and links. Fourth, some surgeons with multiple websites may have had some of their content excluded because only the top three Google-identified, professional websites were reviewed. Fifth, this study is based on a convenience sample of the AAOS orthopaedic surgeons, and therefore, we cannot definitively state that our results are completely representative of the population as a whole.

Although there has been an increase in the online presence of orthopaedic surgeons over the past decade, there remains variability based on geography, subspecialty and surgeon sex. Further opportunities exist for the use of the Internet and social media to improve surgeon-patient interactions, educational content, and marketing.

References

References printed in bold type are those published within the past 5 years.


User-created content and communications on Web-based applications, such as networking sites, media sharing sites, or blog platforms, have dramatically increased in popularity over the past several years, but there has been little policy or guidance on the best practices to inform standards for the professional conduct of physicians in the digital environment. Areas of specific concern include the use of such media for nonclinical purposes, implications for confidentiality, the use of social media in patient education, and how all of this affects the public’s trust in physicians as patient–physician interactions extend into the digital environment. Opportunities afforded by online applications represent a new frontier in medicine as physicians and patients become more connected. This position paper from the American College of Physicians and the Federation of State Medical Boards examines and provides recommendations about the influence of social media on the patient–physician relationship, the role of these media in public perception of physician behaviors, and strategies for physician–physician communication that preserve confidentiality while best using these technologies.

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For author affiliations, see end of text.

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Table. Online Physician Activities: Benefits, Pitfalls, and Recommended Safeguards

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<td>Establish guidelines for types of issues appropriate for digital communication</td>
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Telemedicine (the care of a patient in an area remote from the consulting physician using the transmission of imaging and health data from 1 site to another), the use of electronic resources to prescribe medicine or diagnose illnesses, social networking resources for patients’ therapeutic benefit, or general issues about the electronic health record, pose ethical challenges. Maintaining trust in the profession and in patient–physician relationships requires that physicians consistently apply ethical principles for preserving the relationship, confidentiality, privacy, and respect for persons to online settings and communications.

The Patient–Physician Relationship

Standards for professional interactions should be consistent across all forms of communication between the patient and physician, whether in person or online. Encounters between patients and physicians should only occur within the bounds of an established patient–physician relationship, which entails rights and obligations for both parties. As stated in the ACP Ethics Manual, physicians “must be careful to extend standards for maintaining professional relationships and confidentiality from the clinic to the online setting” (4). E-mail and other electronic means of communication can supplement, but not replace, face-to-face encounters.

Establishing positive patient–physician relationships and maintaining professional decorum are core elements of training that should be fostered from medical school through all stages of professional development. Online professionalism can pose challenges because of the ambiguity of written language without the context of body language or lack of awareness of the potential abuses of such media (5). The ease of use and immediacy of social media tools—especially if users do not engage in “pausing before posting”—can lead to unintended outcomes or messages.

Methods

This position statement was authored on behalf of the American College of Physicians (ACP) Ethics, Professionalism, and Human Rights Committee, the ACP Council of Associates, and the Federation of State Medical Boards (FSMB) Special Committee on Ethics and Professionalism. They and the authors developed the statement between May 2011 and October 2012. After literature reviews and an environmental assessment to determine the scope of issues, drafts were debated, and a consensus was reached on issues through facilitated discussion. A draft then underwent external peer review and review by the College and FSMB committees, councils, and leadership, as well as journal peer review. After revisions based on those comments, the position paper was reviewed and approved by the committees and the FSMB Board of Directors and ACP Board of Regents. The position paper is official ACP and FSMB policy.

Positions

Position 1: Use of online media can bring significant educational benefits to patients and physicians, but may also
Many state medical boards have received reports of violations of online professionalism (6).

The initial decision about whether to extend the patient–physician relationship to the online setting includes the following factors: the intended purpose of the exchange and the content of conversation; the immediacy of electronic media and expectations, including response time; how communication will take place (for example, through social networking sites, microblogging, or professional e-mail on a protected server) while maintaining confidentiality; and how emergency or urgent situations will be managed.

The Patient–Physician Relationship: To Friend (and Google) or Not to Friend (and Google)?

Patients will sometimes initiate online communication. One recent study suggested that many patients extend online “friend” requests to their physicians, although very few physicians reciprocate or respond (7). Organizational policy statements increasingly discourage personal communication between physicians and patients online (8). The FSMB specifically discourages physicians from “interacting with current or past patients on personal social networking sites such as Facebook” (9).

Information exchanged on the Web is at least a 2-way street because it may also be available to the general public. Just as patients may learn about the personal behavior of physicians, physicians may observe patients participating in risk-taking or health-averse behaviors. Information about a patient from online sources may be helpful in the care of that patient, but physicians should be sensitive to the source. They should use clinical judgment in determining whether and how to reveal it during their management of the patient.

This online practice, known as patient-targeted Googling, has been described in many settings, including an attempt to identify an unconscious patient in the emergency department. But often, it instead can be linked to “curiosity, voyeurism and habit” (10). Although anecdotal reports highlight some benefit (for example, intervening when a patient is blogging about suicide), real potential exists for blurring professional and personal boundaries. Digitally tracking the personal behaviors of patients, such as determining whether they have indeed quit smoking or are maintaining a healthy diet, may threaten the trust needed for a strong patient–physician relationship (11). Commentators encourage physicians to consider the intent of the search, whether it affects continuing therapy for the patient, and how to appropriately document findings with implications for ongoing care.

Patient and Physician Education

The Internet can be a powerful tool for education. Patients can share and discuss information using illness-specific social networking pages (10). The Pew Internet and American Life Project estimates that 8 in 10 Internet users go online for health information, making it the third most popular activity online among those in Pew Internet surveys (12).

Physicians should consider the quality of online resources they recommend and guide patients to peer-reviewed media and Web sites where the quality control of information can be checked. Using and sharing recommendations from state medical boards or the College may help direct physicians and patients to resources that are more accurate and objective.

Online learning opportunities can be used by patients and physicians. New care delivery models embrace social media, especially for sharing resources in resource-poor environments (13, 14). Online decision aids are growing in popularity among motivated patients seeking health information, and they warrant familiarity by physicians (15). Continuing medical education and faculty development activities are now on the Web, with online learning modules and social media platforms available for specialists and generalists to share experiences and network.

The Internet and social networking can also serve the public health (16). For example, text messaging on a public health level can bring health benefits. But online activities also bring ethical challenges for the profession and individual physicians. Digital media may help to increase physician–physician interaction and education via online discussion communities and similar means; however, it is the responsibility of physicians to ensure to the best of their ability that professional networks are secure and that only verified and registered users have access to shared information. Online postings can also be used to help advocate for public health issues and broadly educate groups of patients on specific conditions and treatment. Clinical vignettes, however, must have all personal identifying information removed, including any revealing references to a patient who serves as the basis for an illustrative narrative. Consent from the patient to use his or her personal story online should be obtained.

Just as with informal in-person discussions among colleagues, the airing of frustrations and “vent[ing]” may occur in online forums. The ACP and the FSMB recommend against this practice, even among close contacts, as it may be disrespectful and undermine professionalism. We also caution against this practice in other forums, specifically blog postings or microblog sites, such as Twitter, as the material may present the physician or physician-in-training in an inappropriate or unprofessional light (17). Physicians criticizing late-arriving patients or disparaging patients for not adhering to behavior changes (such as diet and weight loss) can undermine trust in the profession.

Confidentiality

Confidentiality respects patient rights and privacy, and this encourages patients to seek medical care and openly discuss issues. Confidentiality may be hard to maintain given electronic health records, electronic data processing, e-mail, the faxing of patient information, third-party pay-
ment for medical services, and the sharing of patient care and information among several health professionals and institutions; therefore, “Physicians must follow appropriate security protocols for storage and transfer of patient information to maintain confidentiality, adhering to best practices for electronic communication and use of decision making tools” (4). In addition, they should be aware of state and federal legal requirements, including the privacy rule from the Health Insurance Portability and Accountability Act of 1996 (HIPAA) and updates to the rule (18).

In digital environments, the sharing of patient information must always be held to a higher level of security than standard residential Internet connections. Encrypted or virtual proxy network connections in hospital-based information technology systems should be used for all patient information exchange and review to ensure a secure digital environment. Institutional-based policies on home access of the electronic health record should be reviewed before use, specifically maintaining the level of security required for use on personal devices. Many institutions use mobile device management systems for smartphones and tablet devices. This allows for remote monitoring of the hospital’s digital “perimeter” and remote disabling of devices that are lost or confiscated.

Because many physicians use mobile devices to help manage their professional careers, mobile solutions are required to ensure confidentiality, especially when such devices or tablet computers are used to access electronic medical records. Digital devices must be configured to protect patient information should the devices be misplaced or stolen; mobile management solutions can help provide such a safety net (19). In addition, the use of public, unsecured wireless networks and cellular device networks is discouraged given their inherent public accessibility and the potential for patient information to be compromised. The recent Imprivata study of text messaging in health care settings echoes these concerns, with 64% of physician respondents classified as very concerned over HIPAA compliance when sending patient health information by text. Nearly 72% believed that secure text messaging solutions would replace standard numerical pagers in current use within 3 years (20). The disposal of old devices with hospital-based connectivity or access to the electronic health record should be managed on the basis of institutional policy.

With respect to more specific use and sharing of digital media, cell phone photography, for example, is still considered a form of photography. Despite its ease of use and ubiquity, it requires obtaining formal written consent from the patient. In taking a patient photograph or radiographic image, the physician is accepting responsibility to protect this information just as for all health records. Deidentification of radiographic images in the context of educational lectures must be ensured (21).

Medicine and Society

Professionalism is the foundation for the social contract between physicians and society (22). In exchange for the privilege of caring for patients, as well as the status, respect, and financial compensation that accompanies that privilege, society expects physicians to practice in a professional and empathetic manner (23) and to self-regulate (4).

The intimate nature of the relationship between physicians and patients results in the expectation of high ethical behavior by physicians (24). Societal expectations often extend beyond professional practice and into the daily activities of the physician. Poor judgment reflects not only on the individual physician but also on the profession. State medical boards have the authority to discipline physicians, including license restriction, suspension, or revocation, for inappropriate uses of social media, such as improper communication with patients (for example, sexual misconduct), unprofessional behavior, and misrepresentation of credentials.

The ACP Ethics Manual requires that “physicians' conduct as professionals and as individuals should merit the respect of the community” (4). Explicit definitions and expectations of physician behaviors, both in and outside the presence of patients, have been defined by organizations, such as the United Kingdom’s General Medicine Council (25).

Position 2: The boundaries between professional and social spheres can blur online. Physicians should keep the two spheres separate and comport themselves professionally in both.

Role and Representation

The ACP Ethics Manual stresses the importance of maintaining public trust in the medical profession and in patient–physician relationships. To maintain the respect of the community as individuals and as members of a profession, not only should the content of all online postings be considered but also the role of the individual posting the information. Are individuals posting material in their role as physicians, or are they merely stating opinions and also happen to practice medicine? Can this distinction be maintained?

The American Medical Association strongly suggests divorcing public and professional digital identities, specifically maintaining separate online sites or identities for the separate roles (16). This underscores the importance of education on the use of digital media and pertinent issues of confidentiality. The ACP Ethics Manual states, “Physicians who use online media, such as social networks, blogs, and video sites, should be aware of the potential to blur social and professional boundaries” (4). Problems occur when individuals post questionable material while identifying themselves as a physician or physician-in-training (26–28).

At times, physicians may be asked or may choose to write online about their professional experiences, or they...
may post comments on a Web site as a physician. When doing so, they must disclose their credentials and any conflicts of interest. They should consider the dangers of posting or responding to comments on the Web. Truly anonymous postings do not exist on the Web, and with the increased sophistication of searching and search engines, the ability to link posts or comments to the original contributor has expanded (29). Physicians should be aware that information posted on a social networking site may be disseminated (whether intended or not) to a larger audience, be taken out of context, and remain publicly available or retrievable online in perpetuity. Physicians should follow their institutional policy on digital media (30) and seek guidance from professional societies and state medical boards.

Maintaining Boundaries

The ACP and the FSMB advise against including patients in the physician’s personal and social interactions online. Professional distance and privacy are appropriate for both physician and patient. Physicians should not “friend” or contact patients through personal social media. Physicians should familiarize themselves with the privacy settings and terms of agreements for social media platforms to which they subscribe, and they should maintain strict privacy settings on personal accounts. Professional profiles should be constructed with an explicit purpose (such as networking and community outreach).

Public Consumption

Physicians-in-training, who at present are most apt to use social media platforms, agree on the responsibility to represent themselves professionally online and are aware that they, and the profession, are being assessed by their online behaviors (7). Although narrative work has described the psychological benefit of “collective venting toward the process of being doctored” (31), the public availability of online medical class skits, songs, shows, and other material previously intended for sharing in private, physician-only audiences has called into question these traditions.

Although we will not attempt to dissect the implications of such offerings, it is clear that these are experiences that are not generally intended for public consumption and, despite any value to the psyche of the trainees, should be examined more closely by medical educators and not shared online or in other mass media. It is prudent to consider the effect of publicly posting something that initially seems like harmless medical humor. Consideration should be given to how patients and the public would perceive the material and what effect this may have on the individuals involved as well as their institutions and the medical profession. Many institutional policy statements encourage a “pause-before-posting” moment where medical professionals are asked to reflect on how the general public may perceive the content.

Interprofessional Relationships

Another issue requiring consideration is online relationships between physicians of varying levels of training, specifically, attending physicians and their students and residents. Attending physicians frequently receive online “friend” requests from students and residents (32). These digital “relationships” can also blur professional and personal boundaries, especially when the faculty physician is in the role of evaluator. Faculty and trainees should examine the purpose of initiating an online relationship and decide whether it is for ongoing mentorship, research work, or career advice (32). Regardless of intent, the traditional boundaries encouraged in trainee–faculty relationships should apply when those parties interact through social media. These boundaries should also apply with staff, other clinicians, and allied health professionals.

Position 3: E-mail or other electronic communications should only be used by physicians in an established patient–physician relationship and with patient consent. Documentation about patient care communications should be included in the patient’s medical record.

Effective communication is a foundation of a strong patient–physician relationship. E-mail or other electronic communications can supplement face-to-face encounters if done under guidelines (4, 33). Using e-mail to provide therapeutic advice is not recommended when a patient–physician relationship has not been previously established. Some state laws (for example, those in Hawaii) do not require a preexisting relationship for e-mail or other electronic consultation between a physician and a patient (that is, the physician has not met or examined the patient) (34); however, the ACP and the FSMB do not support this practice.

Documentation of communications in an established patient–physician relationship, including those done electronically, should be maintained. “Medical records should contain accurate and complete information about all communications, including those done in-person and by telephone, letter or electronic means” (4).

Situations in which a physician is approached by electronic means for clinical advice in the absence of a patient–physician relationship should be handled with careful judgment; they should usually be addressed with encouragement that the individual schedule an office visit or, in the case of an urgent matter, go to the nearest emergency department.

E-Communication and Established Relationships

E-communication between patients and physicians with an existing relationship requires discussion and previous agreement before electronic exchange is initiated. Guidelines exist for interactions with patients via e-mail (33), including the appropriate type of information to share and the expectations about turnaround time. The nature of e-mail communication ensures a written copy of
the exchange, but patient confidentiality must be assured, such as through the use of a hospital-based server. A discussion of the protections in place to ensure patient privacy must also occur.

Documentation of the patient’s consent and awareness of the security and risks associated with the use of patient–physician e-mail should be included in the medical record (35). Physicians should not use personal e-mail accounts for these communications but rather encrypted messages over secure network connections. Web-based portals offer messaging through secure accounts on the portal. Physicians must maintain appropriate boundaries (36) and recognize that electronic communication merely supplements face-to-face encounters.

Electronic communication with patients, if done in a systematic and thoughtful way, can improve patient care and outcomes. Studies have demonstrated that in patients with chronic disease management needs, supplemental electronic communication served as a “booster” to physician advice and improved adherence to therapy (37, 38). It may also improve patient and physician satisfaction by increasing the actual or perceived time spent communicating and having questions answered (39). As other Web tools begin to show promise, this communication is often not limited to standard e-mail (40). Physicians and patients should be discouraged from communicating on health matters through social media tools that are publicly viewable, do not ensure patient confidentiality, and are not readily recordable or admissible to the medical record.

Physicians should be aware of legal requirements in their states about these communications and the risk for state medical board violations or other issues if the physician is not licensed in the state in which the electronic communications are received.

“The MD Will BRB [Be Right Back]”

Expectations for immediate access have led to non–Web-based forms of communication by means of multimedia messaging services and short or text messaging services (41). Several large pharmacies and insurers have piloted systems for prescription refills and appointment updates (42); however, these interactions are largely unidirectional (such as update or reminder texts) with several layers of encryption for security. Despite these advances, current technology does not provide adequate security to prevent third-party access to information. Also, text messaging is not analogous to e-mail because of its abbreviated format and the greater possibility of missed messages. Therefore, physicians should not use text messaging for medical interactions with even established patients except with extreme caution and with patient consent.

Position 4: Physicians should consider periodically “self-auditing” to assess the accuracy of information available about them on physician-ranking Web sites and other sources online.

Ranking, feedback, and other Web sites may offer patients insight into physician training and office practices. Physicians and patients should recognize that this information may not be complete or accurate. Physicians may have little recourse in deleting misrepresentations (43–45). Establishing a professional profile so that it “appears” first during a search, instead of a physician-ranking site, can provide some measure of control that the information read by patients before and after the initial encounter is accurate. Physicians should consider doing routine surveillance (46) of their online presence by searching for their names, and they should correct inaccurate information.

Position 5: The reach of the Internet and online communications is far and often permanent. Physicians, trainees, and medical students should be aware that online postings may have future implications for their professional lives.

How one is represented affects public, patient, and peer perceptions. Colleagues may often be superiors or those in an evaluative capacity. The online behaviors an individual displays may harm employability and recruitment, may result in limitations in professional development and advancement, and may reflect poorly on the profession as a whole.

Many institutions have begun to harness the power of digital media to attract patients, new faculty, or trainees, especially in allied health professional education (47). These technologies can be used as recruitment or screening tools. Employers have turned away job applicants on the basis of questionable digital behavior, including provocative or inappropriate photographs or information, content that displays drinking or drug use, and evidence of poor communication skills (48). Anecdotal reports indicate that medical school admissions offices and residency training programs are increasingly using the Web to prescreen candidates. Many trainees may inadvertently harm their future careers by not responsibly posting material or not actively policing their online content. Educational programs stressing a proactive approach to digital image (online reputation) are good forums to introduce these potential repercussions.

The implications for professional life extend beyond being a prospective applicant to career advancement. A physician’s digital image can have positive or negative career repercussions. Several very public missteps have been documented, including physicians taking digital photographs during surgery (49), posing with weapons and alcohol (in some instances during humanitarian work) (50), and unprofessional microblog posts (for example, “tweets”) (51) that may ultimately harm both the individual and the profession. One’s digital image should be actively managed beyond training by maintaining the separation of professional and personal images and the clinical and nonclinical use of social media. Being proactive by controlling posted content, using privacy settings, and limiting access to per-
sonal information is in the best interest of both the profession and the individual physician.

CONCLUSION

Online technologies present both opportunities and challenges to professionalism. They offer innovative ways for physicians to interact with patients and positively affect the health of communities, but the tenets of professionalism and of the patient-physician relationship should govern these interactions. Institutions should have policies in place on the uses of digital media. Education about the ethical and professional use of these tools is critical to maintaining a respectful and safe environment for patients, the public, and physicians. As patients continue to turn to the Web for health care advice, physicians should maintain a professional presence and direct patients to reputable sources of information.

Digital media use for nonclinical purposes may affect societal perceptions of the profession, especially when questionable content is posted by physicians in their personal use of the Web. Maintaining separate personal and professional identities in Web postings may help to avoid blurring boundaries in interactions with patients and colleagues.

The ACP and the FSMB recognize that emerging technology and societal trends will continue to change the landscape of social media and social networking and how Web sites are used by patients and physicians will evolve over time. These guidelines are meant to be a starting point, and they will need to be modified and adapted as technology advances and best practices emerge. Physicians are encouraged to take a proactive approach to managing digital identity by routinely performing surveillance of publicly available material and maintaining strict privacy boundaries in interactions with patients and colleagues.

From the University of Chicago, Chicago, Illinois; American College of Physicians and Thomas Jefferson University Hospitals, Philadelphia, Pennsylvania; Federation of State Medical Boards, Euless, Texas; and South East Area Health Education Center, Wilmington, North Carolina.

Acknowledgment: The American College of Physicians and the Federation of State Medical Boards thank reviewers of this position paper: Mitchell A. Adler, MD; Moises Auron, MD; Deborah L. Baruch-Bienen, MD, MA; Bradley H. Crotty, MD; Robert A. Gluckman, MD; Jay A. Jacobson, MD; Terry Kind, MD, MPH; Arash Mostaghimi, MD, MPA; Susan L. Rattner, MD; Thomas E. Reznik, MD; Michael C. Sha, MD; Earl Stewart Jr.; Thomas G. Tape, MD; Susan Thompson Hingle, MD; Alan H. Wynn, MD; and Annals of Internal Medicine reviewers.

Potential Conflicts of Interest: Disclosures can be viewed at www.acponline.org/authors/icmje/ConflictOfInterestForms.do?msNum=M12-2111.

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Dr. Chaudhry: Federation of State Medical Boards, 400 Fuller Wiser Road, Suite 300, Euless, TX 76039.
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Author Contributions: Conception and design: J.M. Farnan, L.S. Sulmasy, H.J. Chaudhry, V.M. Arora.
Critical revision of the article for important intellectual content: J.M. Farnan, L.S. Sulmasy, B. Worster, H.J. Chaudhry, J. Rhyne, V.M. Arora.
Administrative, technical, or logistic support: J.M. Farnan, L.S. Sulmasy, H.J. Chaudhry.
Table. Applicant experience: number of positions, applicants per position as well as number and percentage of programs applied to by applicants over the history of the vascular integrated match

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<td>No. of residency positions available</td>
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<td>19</td>
<td>22</td>
<td>30</td>
<td>41</td>
<td>46</td>
<td>51</td>
<td>57</td>
<td>56</td>
<td>60</td>
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<td>No. of applicants per position (U.S. and Canadian)</td>
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<td>2.1</td>
<td>2.1</td>
<td>2.2</td>
<td>1.6</td>
<td>1.3</td>
<td>1.3</td>
<td>1.4</td>
<td>1.6</td>
<td>1.5</td>
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<td>Average No. of programs applied to by an applicant (percentage of total positions)</td>
<td>3.1 (34%)</td>
<td>8.1 (43%)</td>
<td>13.2 (60%)</td>
<td>14.4 (49%)</td>
<td>19.8 (48%)</td>
<td>22.5 (49%)</td>
<td>21.3 (42%)</td>
<td>27.3 (48%)</td>
<td>33.5 (60%)</td>
<td>35.1 (59%)</td>
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PC114.

Accessing Trends in Academic Impact of Vascular Surgeons Within the National Institutes of Health iCite Database
Frank M. Davis, Andrea T. Obi, Katherine Gallagher, Peter Henke. University of Michigan Medical Center. Ann Arbor, Mich

Objectives: A diverse array of measures are used to evaluate academic physicians. One critical factor is the scholarly impact an author has upon the research discourse within a field. Recently, the National Institutes of Health (NIH) developed the relative citation ratio (RCR) as a method to quantify the impact of published research. The aim of this study was to examine the academic impact of vascular surgeons using RCR within common vascular disease research fields.

Methods: Using the PubMed and NIH iCite database, the scientific fields of abdominal aortic aneurysm, thoracic aneurysm, peripheral arterial disease, carotid disease, deep venous thrombosis, and venous insufficiency were queried for the twenty highest rated articles in each category (1997-2012). Article categories were divided into basic science, health services, and clinical research. To calculate the RCR, article citation rates are divided by an expected citation rate derived from performance of articles in the same field. The resulting RCR is article level and field independent and provides a validated and more accurate measure than journal impact factors. For articles, academic background of the first and last author (influential authors) were collected analyzing procedural specialty, surgery, medicine subspecialty (cardiology, neurology, nephrology), engineering/radiology, and other (anesthesia and pediatrics). Statistical significance between scientific fields and academic background were determined using Student t tests or analysis of variance followed by the Newman-Keuls post hoc test.

Results: The academic impact of vascular surgeons varied substantially based on the scientific field (Table). Vascular surgeons as compared with medical specialists were found to have the highest academic impact in the field of abdominal aortic aneurysm research comprising 51% of the influential authors on the highest rated RCR studies (59 ± 0.8 vs 56 ± 0.8; P = .6). In contrast, vascular surgeons only comprised 13% of influential authors as compared with medical specialists in deep venous thrombosis (RCR of 2.6 ± 0.3 vs RCR of 15.7 ± 1.7; P < .005) and 18% in peripheral arterial disease (RCR of 19 ± 0.5 vs RCR of 21 ± 0.2; P = .78). Grouping all vascular fields of study together, no difference in RCR was found.

Table. Impact of vascular surgeons versus medical specialists by relative citation ratio (RCR) in vascular disease research fields

<table>
<thead>
<tr>
<th>Scientific field</th>
<th>Studies with surgeon influence, %</th>
<th>RCR score vascular surgery</th>
<th>RCR score medical specialties</th>
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<tr>
<td>AAA</td>
<td>51</td>
<td>5.9 ± 0.8</td>
<td>5.6 ± 0.8</td>
<td>.60</td>
</tr>
<tr>
<td>PAD</td>
<td>18</td>
<td>1.9 ± 0.5</td>
<td>2.1 ± 0.2</td>
<td>.78</td>
</tr>
<tr>
<td>TA</td>
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<td>5.6 ± 0.5</td>
<td>4.1 ± 0.5</td>
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<td>2.0 ± 0.2</td>
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<td>DVT</td>
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<td>15.7 ± 17</td>
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<td>AAA DA</td>
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<td>5.6 ± 0.8</td>
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<tr>
<td>PAD PA</td>
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<td>1.9 ± 0.5</td>
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<tr>
<td>CVOD CA</td>
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<td>8.9 ± 13</td>
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<tr>
<td>CVI CA</td>
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<td>2.9 ± 0.2</td>
<td>2.0 ± 0.2</td>
<td>.005</td>
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Self-Identified Vascular Surgeons More Likely to Post Objectionable Content
Scott Hardouin,1 Thomas W. Cheng,2 Stephen Raulli,3 Douglas W. Jones,1 Jeffrey Siracuse,1 Erica L. Mitchell,2 Alix Farber3. Boston Medical Center, Boston, Mass. 2Boston University School of Medicine, Boston, Mass. 3Oregon Health & Science University, Ore

Objectives: The ability to communicate and share information through social media is invaluable but carries with it a risk of permanently exposing unprofessional behavior. Our goal was to evaluate the level of professionalism among recent vascular surgery fellows and residents.

Methods: The Association of Program Directors in Vascular Surgery directory was used to compile a list of the vascular fellows/residents from 2016 to 2018. Neutral Facebook, Twitter, and Instagram accounts were searched for public information and analyzed. All content within each platform was screened by two separate investigators for predetermined material categorized as either unprofessional or potentially objectionable. Unprofessional content included HIPAA violations, appearing intoxicated, unlawful behavior, possession of drugs or drug paraphernalia, and uncensored profanity or offensive comments about colleagues/work/patients. Potentially objectionable content included holding/consuming alcohol, inappropriate attire, censored profanity, controversial political or religious comments, and controversial social topics. Descriptive data were compiled and the Fishers exact test was used for categorical comparisons.

Results: Evaluation of 480 vascular trainees revealed that 325 (68%) were male, 456 (95%) held MD degrees, and 115 (24%) were integrated 0-5 residents. A total of 235 trainees (49%) had an identifiable account on at least one platform and 135 (55%) identified themselves as vascular surgeons. Sixty-one (30%) account holders had either unprofessional or potentially objectionable content, with eight (3.4%) containing content categorized as unprofessional. The only forms of unprofessional content identified were obvious alcohol intoxication in three Facebook accounts and uncensored profanity or offensive comments about colleagues/work/patients in one Facebook and five Twitter accounts. Potentially objectionable content included holding/consuming alcohol (12.3%), controversial political comments (9.4%), inappropriate/offensive attire (5.8%), censored profanity (3.4%), controversial social topics (2.5%), and controversial religious comments (0.9%). There was no significant difference in objectionable content between gender, training (MD vs non-MD), or track (0-5 or 5-2; all P > .05). However, there was more unprofessional or potentially objectionable content for those who self-identified as vascular surgeons (33% vs 17%; P = .007)

Conclusions: One-half of recent and current vascular trainees had an identifiable social media account with nearly one-third of these containing unprofessional or potentially objectionable content. Account holders who self-identified as vascular surgeons were more likely to be associated with objectionable social media behavior. Young surgeons should be aware of the permanent public exposure of potentially objectionable content that can be accessed by peers, patients, and current/future employers.

Resident Assembly Advisory Opinion #2

State Main Purpose/Title
Appropriation of Funding for Resident Assembly Sponsored Expansion of the “JAAOS Unplugged” Podcast

Resident’s Name
Ayoosh Pareek, MD [1]
Mitchell Fourman, MD M.Phil [2]
Andy Jensen, MD [1]
Adam Tagliero, MD [1]

Residency Program
1. Mayo Clinic
2. University of Pittsburgh Medical Center

Are you a Resident Delegate?
Yes

Classification of Proposed AO (To the AAOS, to the RA or Other)
AAOS

WHEREAS:
The MLDC of the AAOS adopted a Resident Assembly Advisory Opinion in 2018 asking for the launch of a JAAOS podcast, which would provide a summary of key articles from each issue of the Journal.

WHEREAS:
In conjunction with the editors of JAAOS, the “JAAOS Unplugged” podcast was launched for the January 15th, 2019 issue of JAAOS. This podcast was released every month, and hosted by Resident Assembly Past Chair Andy Jensen.

WHEREAS:
The following two resident-focused topics are among the top ten downloaded JAAOS podcasts, and the first listed included an interview with Kristy Weber, MD, FAAOS.

<table>
<thead>
<tr>
<th>Title</th>
<th>Released</th>
<th>Feb</th>
<th>Mar</th>
<th>Apr</th>
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<td>The Gender Gap + Orthopaedic Research Summaries</td>
<td>7/16/2019</td>
<td>43</td>
<td>46</td>
<td>7</td>
<td>2327</td>
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<tr>
<td>Leadership and Mentorship + Orthopaedic Research Summaries</td>
<td>2/27/2020</td>
<td>589</td>
<td>1003</td>
<td>61</td>
<td>1653</td>
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WHEREAS:
In light of the success of the “JAAOS Unplugged” podcast, expansion to bimonthly iterations via Resident Assembly sponsorship would shed further light on the achievements and participation of rising resident leaders in a very visual and previously successful platform. Per the JAAOS editorial team an allocation of $7,000 per year is required to permit this expansion.

RESOLVED A:
The AAOS will allocate a sum of $7,000 to the Resident Assembly for the specific use of funding an expanded “JAAOS Unplugged” podcast. This sum will be renewed yearly.

RESOLVED B:
To ensure the quality to the AAOS each year, a “JAAOS Unplugged” editorial board will be created. The initial iteration will contain Andy Jensen, the current chair of the Resident Assembly Research Committee, and an assigned JAAOS Deputy Editor. In this manner, the expanded podcast can ensure continued quality with this volume expansion.
Medical Education Podcasts: Where We Are and Questions Unanswered

Justin Berk, MD MPH MBA, Shreya P. Trivedi, MD, Matthew Watto, MD, Paul Williams, MD, and Robert Centor, MD

1Department of Pediatrics and Medicine, Warren Alpert School of Medicine at Brown University, Providence, RI, USA; 2New York University School of Medicine, New York, NY, USA; 3Perelman School of Medicine - University of Pennsylvania, Philadelphia, PA, USA; 4Lewis Katz School of Medicine at Temple University, Philadelphia, PA, USA; 5University of Alabama at Birmingham School of Medicine, Birmingham, AL, USA.

Social media, particularly podcasts, has become an influential modality within informal medical education. As podcasts continue to become more prevalent among learners of all types, clinical educators of the future must be able to help navigate this new pedagogy. Preliminary data demonstrates that medical students, residents, post-training physicians, and advanced practitioners all utilize podcasts for their own benefit. New data is discussed in the setting of the current literature on podcasting and important questions remain to determine how this new form of learning can and will be integrated into formal and informal medical curriculum.


WHAT WE KNOW

“I heard on a podcast that pickle juice could help with Mrs. R’s muscle spasms...” Statements like this are more common in the clinics and wards as learners use new educational modalities to supplement their learning. As podcasts become more prevalent, clinician-educators must seek a greater understanding of how this new form of knowledge dissemination fits into current educational programming.

Both graduate and undergraduate medical educators are incorporating asynchronous learning and “flipped classroom” pedagogies. Podcasts brings a novel and popular addition to the educator’s armamentarium. Several residency programs, particularly in Emergency Medicine (EM), have integrated digital education resources into formalized graduate medical education. Subspecialties such as Nephrology have embraced podcasts and the “Social Media Revolution” in education.

Podcasts in particular have grown exponentially relative to other asynchronous medical education resources.

Many residents use and prefer podcasts to supplement their education. One survey of 356 EM residents found that 88% reported listening to medical education podcasts at least once a month. Another study of 226 EM residents identified podcasts as the most popular form of extracurricular education and as the most beneficial learning method compared to textbooks, journals, and Google. More recently, podcasts have gained similar popularity in Internal Medicine. The Curbsiders Internal Medicine podcast averages over 40,000 downloads per weekly episode. Podcast producers include not only individual practitioners and educators (e.g., The Curbsiders, Annals on Call, Core IM, Bedside Rounds, Clinical Problem Solvers) but also influential medical journals (e.g., JAMA, NEJM, Annals of Internal Medicine). We are only beginning to appreciate the extent and degree of the changing landscape.

PRELIMINARY DATA

Who listens to medical education podcasts? Using self-reported data from an internally collected survey of 10,089 subscribers to The Curbsiders, approximately 38% identified as internists, specialists, faculty, or post-training physicians; 23% as residents or fellows; 20% as advanced practitioners (e.g., physician assistants or nurse practitioners); and 15% identified as students (see Fig. 1). Listeners clearly extend across the spectrum of practitioners, educators, and trainees.

Many podcasts now offer Continuing Medical Education (CME) and Maintenance of Certification (MOC) credits. The CME/MOC credits are sponsored through societal organizations like American College of Physicians (ACP) and Society of Hospital Medicine (SHM). In the past 6 months, 4730 CME credit have been claimed for “Annals On Call,” a popular podcast produced by Annals of Internal Medicine and hosted by Dr. Robert Centor.

WHAT IS YET TO BE EXPLORED

Our data suggest that medical education podcasts are being adopted at all training levels. We note that students are a substantial portion of the podcast subscriber pool, other research confirms wide use by residents, and our CME utilization data demonstrates use after training. This asynchronous learning is, as others have stated, “a paradigm shift in education.” The increasing popularity of Internal Medicine podcasts suggest an unmet need now being addressed with a

Received September 26, 2019
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new educational modality. What are those unmet needs and
what can we learn from and deduce from this rapid adoption?

Podcasting adds several potential benefits for learners. First,
convenience allows learners to listen while cooking dinner,
commuting to work, exercising, or engaging in other activities.
In an era of increasing demands on physician time, this feature
provides greater flexibility when compared to other learning
opportunities. Listeners have identified podcasts as a more
efficient and enjoyable way to keep up to date.7 Second,
podcasting offers exposure to international expertise that
may not otherwise be accessible. Third, the format creates a
low-stress atmosphere that is less intimidating to learners.
Podcasts create low-stakes dialogue that engenders a positive
learning environment. Indeed, though podcasting utilizes
innovative technologies, the ultimate pedagogy reflects back to
an oral tradition of learning medicine. These benefits align
with Knowles’ theory of andragogy, empowering adult
learners to plan their own content and ensure it is directly
relevant.

Questions regarding best practices remain. How do we best
utilize portable, just in-time learning to improve medical edu-
cation for learners of all training levels? Are there specific
characteristics (style, duration, production level) of podcasts
that are associated with wide dissemination, improved knowl-
edge retention, or improved clinical practices? Many of the
more popular medical education podcasts offer a casual tone
and “show notes” that offer visual summaries of topics
discussed or links to enable learners to find primary sources
mentioned.

Existing literature shows reasonable knowledge uptake
through similar “flipped classroom” digital innovations,
though there is mixed data on changes of clinical practices.2
Some initial quality indicators of podcasts have been identified
by clinical educators8 and attempts have been made to criti-
cally evaluate online medical education resources.9 But does
convenience of these modalities facilitate learning while mul-
titasking or take away from focused study? Future studies can
offer more robust investigation to determine how podcast
practices affect higher levels of cognition within Bloom’s
taxonomy of learning.

The rapid uptake of podcasts has implications for clinical
instructors. Medical educators of the future will need to be
early adopters of technology and act as a coach to determine
the best ways to navigate these resources.10 For example, what
shape will critical appraisal of these “free open access medical
education” (“FOAM”) resources take? Will there be journal
cubs for podcast episodes? Should there be formal peer-
review? Similar to point-of-care ultrasound training, educators
need to be intimately familiar with new technologies to help
guide their use. Modern clinical educators will need to be the
curators of valuable resources available online, role models for
professional engagement with social media tools, and serve as
coaches in the evolving field of digital scholarship.

Harnessing this technology may do more than just increase
knowledge retention.11 Perhaps it may help combat some of
the more “wicked” problems facing medicine today. Social
media such as Twitter and podcasts have the potential to make
explicit and positively influence the “hidden curriculum,”
which at times can be toxic and perpetuate moral injury.
Producers of podcast content can serve as role models for
curiosity, camaraderie, and professional satisfaction for novice
learners. Social learning theory asserts that individuals learn
by observing others12; in the case of podcasts, listening to
others may not only disseminate medical knowledge but en-
gage in critical thinking and sharing cultural competencies.
Core IM recently released a new series called “At the Bedside”
that gives a space to speak openly about common issues that
fall outside of the traditional realm of evidence-based medi-
cine, such as approach to “difficult” patients or advantages and
pitfalls of dark “gallows humor” in Medicine. Podcasts are
virtual communities of practice. Unlike one’s static institu-
tional environment, podcasts offer learners an opportunity to tune
in to the community of practice of their choosing. What impact
might this have on sharing values or finding role models in the
field of medicine?

Podcasting will inevitably become a core component of
medical education, either formally or informally. As more
clinician educators embrace this modality, rigorous research
should focus on how and when they can best be used to create
positive outcomes in learner practices. Further studies must
investigate how podcasts can be optimized for knowledge
retention while also having positive impacts on the hidden
curriculum. Clinician educators must be involved in the con-
versation to build on what has been created thus far and how to
best evaluate resources critically going forward. Moreover,
curricula must evolve to teach learners how to critically evalu-
ate digital media. Meanwhile, residents and attendings will
have to adapt (and likely embrace) this new form of scholar-
ship commonly cited on rounds.
Acknowledgments: The authors would like to thank Leonard Feldman, MD (Johns Hopkins), for his comments on an early version of this manuscript and Stuart Brigham, MD, for his work on The Curbsiders and assistance in guiding the internal survey of listener demographics.

Corresponding Author: Justin Berk, MD MPH MBA; Department of Pediatrics and Medicine Warren Alpert School of Medicine at Brown University, 245 Chapman Street, Providence, RI 02905, USA (e-mail: jberk1@lifespan.org).

Compliance with Ethical Standards:

Conflict of Interest: The authors acknowledge their intellectual property COI: JB, MW, and PW as producers of The Curbsiders podcast; ST as producer of the CoreIM podcast; and RC as producer of the American College of Physician’s Annals on Call podcast.

REFERENCES


Publisher’s Note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.
**Resident Assembly Advisory Opinion #3**

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<th>State Main Purpose/Title</th>
<th>Development of a formal medical student “Orthopaedic Surgery Interest Group (OSIG)” toolkit</th>
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<td>2. University of Mississippi</td>
<td>3. University of Pittsburgh Medical Center</td>
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<tr>
<td>Classification of Proposed AO (To the AAOS, to the RA or Other)</td>
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**WHEREAS:**
Medical student recruitment has been established as a priority by both the AAOS and the AAOS Resident Assembly, both as a way to foster interest in orthopaedic surgery and to continue to reinforce the AAOS as the standard bearer in orthopaedic surgeon education and advocacy.

**WHEREAS:**
Medical student resources are cited on the AAOS website ([https://aaos.org/membership/medicalstudentresources/](https://aaos.org/membership/medicalstudentresources/)), and include practice design and specialty-selection advice from the Ruth Jackson Orthopaedic Society. While OSIG involvement is recommended, no further information or tools are published.

**WHEREAS:**
Involvement in an OSIG has been associated by Mickelson et al.\(^1\) with improved orthopedic knowledge, mentorship quality and availability, and overall interest in orthopedics.


**RESOLVED A:**
The AAOS will develop in-house resources that will be made available at no or minimal charge to current and potential institutional OSIGs – an “OSIG toolkit”

**RESOLVED B:**
Specific resources of interest may include but should not be limited to:
- A contact directory for all current OSIGs, with attending advisor names included
- A scaffolding diagram for potential OSIG websites, which should include a listing of recommended resources and appropriate links to AAOS resources
- A recommended medical student reading list for residency preparation
- OSIG logo and marketing development to associate OSIG participation with AAOS involvement (this can be in conjunction with AAOS medical student membership as this category is developed)
- A recommended OSIG curriculum for programs to pursue throughout the year
- A listing of AAOS and non-AAOS grant opportunities for potential OSIG activities, which can include clinical education, research, and potential cadaveric training

Revised: 12/15
Increasing medical student exposure to musculoskeletal medicine: the initial impact of the Orthopaedic Surgery and Sports Medicine Interest Group

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Philip K Louie²
Kenneth R Gundle³
Alex W Farnand⁴
Douglas P Hanel⁵
¹Department of Orthopedic Surgery and Sports Medicine, Duke University, Durham, NC, USA; ²Department of Orthopedic Surgery, Rush University Medical Center, Chicago, IL, USA; ³Department of Orthopedics and Rehabilitation, Oregon Health and Science University, Portland, OR, USA; ⁴Department of General Surgery, Presence Saint Joseph Hospital – Chicago, Chicago, IL, USA; ⁵Department of Orthopedic Surgery and Sports Medicine, University of Washington, Harborview Medical Center, Seattle, WA, USA

Purpose: To investigate the impact of the Orthopaedic Surgery and Sports Medicine Interest Group (OSSMIG) on medical student interest and confidence in core musculoskeletal (MSK) concepts through supplemental education and experiences at a single tertiary, academic institution.

Methods: Medical student OSSMIG members at various levels of training were anonymously surveyed at the beginning and end of the 2014–2015 academic year.

Results: Eighteen (N=18) medical student interest group members completed the survey. Significant improvement in their level of training was observed with regard to respondents' self-assessed competence and confidence in MSK medicine (p<0.05). Additionally, respondents' attitudes toward exposure and support from the interest group were significantly higher than those provided by the institution (p<0.05). Members believed OSSMIG increased interest in MSK medicine, improved confidence in their ability to perform orthopedics-related physical exams, strengthened mentorship with residents and attendings, and developed a connection with the Department of Orthopedic Surgery and its residents (median “Strongly Agree”, interquartile range one and two scale items).

Conclusion: Since its inception 8 years ago, OSSMIG has been well received and has positively impacted University of Washington School of Medicine students through various interventions. Surgical interest groups should target both the students interested in primary care and surgery. Medical schools can provide additional exposure to MSK medicine by leveraging interest groups that provide early clinical experiences and supplementary instruction.

Keywords: musculoskeletal education, medical education, supplemental experience, student teaching

Introduction

The burden of musculoskeletal (MSK) disorders within the USA and around the world is not reflected in current medical school curriculums.¹ MSK diseases affect over half of the USA population and account for over 18% of the 1.3 billion annual health care visits.²,³ However, medical students often lack confidence and knowledge about MSK medicine, especially those pursuing nonorthopedic careers.⁴–⁷ Additionally, for students interested in pursuing surgical careers, previous research has demonstrated that early opportunities, clinical exposure, and positive role models have a positive impact.⁸,⁹ This is especially true during the preclinical years and third year clerkships, prior to beginning the residency application process.¹⁰–¹²
The University of Washington School of Medicine (UWSOM) has been ranked by the US News and World Report as the No. 1 medical school in the nation for primary care training in 23 of the past 24 years. The average number of UWSOM students entering primary care specialties has been over 50% annually. The UWSOM required curriculum includes one-quarter of MSK education during the first year, one general surgery rotation, and one elective surgical rotation. With an emphasis on primary care, the majority of this curriculum provides limited exposure to surgical specialities.

The Orthopaedic Surgery and Sports Medicine Interest Group (OSSMIG) was established in 2009. Its goals were to provide supplemental education and experiences of core MSK concepts, examinations, and diagnoses; as well as support students interested in applying to orthopedic surgery residency programs. It was proposed that OSSMIG would increase interest in orthopedics and improve medical students’ competency and confidence in MSK medicine, regardless of their chosen career path. The purpose of this study is to assess the OSSMIG through an anonymous survey of its participants.

Materials and methods

Conception and development of OSSMIG

The OSSMIG was established in August 2009 led by junior medical students with support from the orthopedic surgery department and its residents. Founding officers created a constitution and registered with the institution’s Student Activities Office. The constitution outlined five core objectives:

1. Provide students additional MSK instruction through lectures and workshops.
2. Present students with opportunities to experience the field of orthopedic surgery outside of the classroom.
3. Offer students orthopedic research and networking opportunities.
4. Support students applying for orthopedic surgery by advising them throughout the process.
5. Promote mentoring among medical students, residents, and the attending surgeons.

To improve the quality of mentorship and experiences, OSSMIG cultivated a relationship with the institution’s Department of Orthopedic Surgery and Sports Medicine. This relationship was established through a faculty advisor who oversaw a core group of orthopedics residents interested in educating and mentoring. Residents acted as liaisons by coordinating, teaching, and leading events.

OSSMIG officers sent information to all UWSOM students and presented at the annual interest group fair to engage anyone interested in MSK medicine. An institutional listserv (application that circulates emails to subscribers) was created, allowing leadership to easily communicate with group members. A full-featured, department-supported OSSMIG website (http://www.orthop.washington.edu/?q=ossmig/orthopaedic-surgery-and-sports-medicine-interest-group-ossmig.html) was created, which includes announcements, calendars, and member resources.

Since inception, OSSMIG has developed and maintained a diverse offering of activities, workshops, and services. These extracurricular activities allow students to explore MSK medicine and orthopedic surgery, while receiving guidance and gaining knowledge (Table 1). These events and resources are reviewed and adapted annually for quality improvement.

Outcomes

Cross-sectional surveys of OSSMIG members were administered using a secure anonymous institutional online survey system. Surveys were conducted at the beginning and end of each academic year as part of an internal quality assurance and quality improvement process. The survey from the 2014–2015 academic year used a de-identified submission process allowing for blinded data analysis. The institution’s Human Subjects Division reviewed the study and determined it to be exempt from Institutional Review Board approval due to the usage of anonymous surveys and data. Informed consent was provided through the survey platform and verified upon submission of the survey.

At the start of the academic year, members completed a 15-question survey regarding their planned career path, perception of current MSK education, confidence in basic MSK knowledge, and expectations. At the end of the academic year, members completed a 20-question survey inquiring about their satisfaction with OSSMIG, influence on their interests, and comfort with MSK concepts. Answers were provided on a five-point Likert scale.

Statistical analysis

Statistics were performed with R version 3.2.2 (R Core Team, Vienna, Austria) including packages ggplot2, pwr, and plyr. Due to categorical data that did not generally have a normal distribution, nonparametric statistics were utilized. Central tendency is reported by the median and interquartile range (IQR). Differences in paired responses were assessed by the Wilcoxon signed rank test. For unpaired responses, the Wilcoxon rank sum test was used. A p value of <0.05 was considered significant. All analyses were preplanned. A power analysis based on finding a strong effect size estimated
that 18 evaluation periods would provide an 80% chance of finding a difference between paired responses, if one exists.6

Results
Membership
For the 2014–2015 academic year, there were 60 active OSSMIG members (6.7% of the student body; 60/900). Membership consists of students interested in pursuing orthopedic surgery (67%), primary care (22%), and undecided students (11%). From 2009 to 2015, OSSMIG membership increased from 20 to 60 students. Membership peaks at the beginning of each academic year and is highest among preclinical students (67%–first and second year students). The 2014–2015 interest group membership survey response rate was 30% (18/60). The 18 interest group member respondents comprising the analysis group had diverse training levels (three first year, five second year, five third year, four fourth year medical students, and one student declining to answer the question). Respondents were queried at the end of the academic year about the overall influence of OSSMIG on their career plans (N=18). These members reported that OSSMIG confirmed their interest in orthopedic surgery (50%), convinced them to pursue orthopedic surgery (17%), influenced them to continue to pursue another specialty (28%), and dissuaded them from pursuing orthopedic surgery (5%).

Self-assessed competence
Two sets of questions compared respondents’ self-assessed competence and confidence for their level of training. When students were asked if they felt competent with MSK anatomy, responses improved from a median of “Neutral” (IQR – one scale item) before the interest group involvement to “Agree” (IQR – zero) afterward. This self-assessment was significant (Wilcoxon signed rank test, p=0.007; Figure 1). When students were asked if they felt competent with basic MSK trauma care, the median answer from pre- to post-interest group involvement shifted from “Disagree” (IQR – 1.75 scale items) to “Agree” (IQR – two scale items), which was significant (Wilcoxon signed rank test, p=0.006; Figure 2).

Attitudes of institution vs interest group
Two sets of questions compared respondents’ attitudes regarding exposure and support from their institution and the interest group. When responding to a statement about providing adequate exposure to MSK medicine and the field of orthopedic surgery, the interest group received significantly higher scores (median of “Disagree” vs “Agree”, Wilcoxon rank sum test p=0.009; Figure 3). Similarly, when responding to a statement about providing adequate support to students pursuing a residency in orthopedic surgery, the interest group received significantly more positive responses (median of “Disagree” vs “Agree”, Wilcoxon rank sum test p=0.001; Figure 4).

Table I Events and services provided by OSSMIG throughout the academic year

<table>
<thead>
<tr>
<th>OSSMIG events and services</th>
</tr>
</thead>
<tbody>
<tr>
<td>OSSMIG annual planning meeting</td>
</tr>
<tr>
<td>Allows OSSMIG officers, residents, and faculty advisors to meet, review previous events, and coordinate events for the upcoming academic year</td>
</tr>
<tr>
<td>Introduction to orthopedic surgery and musculoskeletal medicine</td>
</tr>
<tr>
<td>Furnishes UWSOM students with information about orthopedic surgery, an introduction to basic concepts in musculoskeletal medicine, and the opportunities available to explore this specialty through OSSMIG</td>
</tr>
<tr>
<td>Emergency room orthopedic Trauma Call</td>
</tr>
<tr>
<td>Provides UWSOM students with the opportunity to take overnight call shifts at Harborview Medical Center. Students assist residents, learning to evaluate and manage acute injuries in the ER, and gain exposure to orthopedic surgery</td>
</tr>
<tr>
<td>Workshop: basic knee, shoulder, and neurologic examination</td>
</tr>
<tr>
<td>Teaches students how to perform a thorough knee and shoulder exam, as well as a proper upper and lower extremity distal neurovascular exam</td>
</tr>
<tr>
<td>Workshop: basic splinting</td>
</tr>
<tr>
<td>Teaches students to correctly apply a variety of splints to the upper and lower extremities, as well as perform simple reduction techniques</td>
</tr>
<tr>
<td>Detailed medical student guides</td>
</tr>
<tr>
<td>These documents include: general orthopedic information, managing away rotations, streamlining the application process, as well as an impression of orthopedic programs. Guides are internally developed and updated annually</td>
</tr>
<tr>
<td>Mentorship networking</td>
</tr>
<tr>
<td>Coordinates longitudinal advising of medical students by senior medical students and residents throughout the medical school and the residency application process</td>
</tr>
<tr>
<td>Community outreach</td>
</tr>
<tr>
<td>OSSMIG members teach local college and high school students about basic musculoskeletal topics through show-and-tell and question-and-answer formats</td>
</tr>
<tr>
<td>Research and preceptorships</td>
</tr>
<tr>
<td>Facilitates UWSOM students’ setting up and coordinating research opportunities and preceptorships with the Department of Orthopedic Surgery and Sports Medicine faculty</td>
</tr>
<tr>
<td>Subinternships/application counseling</td>
</tr>
<tr>
<td>Offers guidance to students throughout the subinternships (away rotations) and residency application process. Meetings and guides are provided</td>
</tr>
<tr>
<td>Fourth year mock interviews</td>
</tr>
<tr>
<td>A simulated interview experience for fourth year medical students applying to orthopedic surgery residency programs. A panel of residents provides feedback</td>
</tr>
</tbody>
</table>

Abbreviations: ER, emergency room; OSSMIG, Orthopaedic Surgery and Sports Medicine Interest Group; UWSOM, University of Washington School of Medicine.
Assessment of the interest group

A series of questions asked respondents about their experiences with the interest group. Overall, the results were positive (Figure 5). Respondents tended to find OSSMIG helpful in deciding whether to pursue a career in orthopedics (median “Agree”, IQR two scale items), increasing interest in MSK medicine (median “Agree”, IQR two scale items), improving confidence and ability to perform orthopedics-related physical exams (median “Agree”, IQR two scale items), fostering mentorships with residents and attendings (median “Agree”, IQR one scale item), and feeling more connected with the Department of Orthopedic Surgery and its residents (median “Agree”, IQR 1.25 scale items). The participants strongly recommended other medical schools to have an active orthopedic interest group (median “Strongly Agree”, IQR one scale item).

Discussion

OSSMIG and MSK medicine education

OSSMIG has evolved over the past 8 years to provide supplementary education, opportunities, and support to UWSOM medical students. Membership increased to over 60 medical...
Impact of orthopedic surgery interest group

students annually, and targets both students interested in pursuing orthopedic surgery (67%) and primary care specialties (22%), but seeking a better understanding of MSK medicine. The group’s greatest impact appears to be the supplemental MSK education, resources, and experiences provided to the medical students outside of the standard UWSOM curriculum. This deficiency of subjective competence with MSK anatomy and basic trauma care was evident in the students surveyed prior to their involvement in OSSMIG (Figures 1 and 2). A lack of exposure to MSK medicine and orthopedics was also reported (Figure 3).

This trend appears to echo a nationwide concern regarding inadequacies in MSK teaching within the medical education landscape. The literature provides widespread evidence that medical students and residents may not be sufficiently prepared to perform accurate MSK workups and examinations. When evaluating medical students, Skelley et al observed only 19% assessed obtained a passing score on the competency assessment. Similarly, Schmale found that <50% of fourth year medical students at a single institution successfully demonstrated competency in MSK concepts.

Figure 3 Medical students’ attitudes toward institutional vs OSSMIG exposure to musculoskeletal medicine and the field of orthopedic surgery.

Figure 4 Medical student attitudes toward institutional vs OSSMIG support to students pursuing a residency in orthopedic surgery.
Though MSK complaints continue to be one of the most common reasons people seek medical care annually, a majority of these patients will not be evaluated by an orthopedic surgeon, but rather by primary care physicians (e.g., family medicine, rehabilitation, internal medicine, and/or pediatrics).\(^1\)\(^,\)\(^2\) Deficiency in MSK knowledge appears to be present in these first-line physician fields.\(^1\)\(^9\)\(^,\)\(^2\)\(^0\) An MSK competency assessment created by Freedman and Bernstein revealed MSK-related knowledge deficiencies in primary care fields.\(^6\) When family practice, internal medicine, and pediatric faculty from a single hospital were assessed by Lynch et al, 64 physicians were not able to demonstrate adequate MSK knowledge.\(^2\)\(^0\)

Although the initiation of an interest group is not necessarily the answer, it provides complementary instruction and unique experiences difficult to provide in a classroom. In orthopedics, dedicated exposure to MSK instruction can improve competence, even in undergraduates.\(^2\)\(^1\) Within OSSMIG, those members surveyed demonstrated a positive attitude toward OSSMIG in a number of areas. The year-end query of students’ subjective competency increased in both MSK anatomy (“Neutral” to “Agree”, \(p=0.007\)) and basic trauma care (“Disagree” to “Agree”, \(p=0.006\)) after involvement in the group’s events (Figures 1 and 2). They believed that OSSMIG increased their interest in MSK medicine and improved their confidence to perform a proficient MSK physical exam (Figure 5). The group was also impactful on students in deciding whether to pursue a career in orthopedics (Figure 5). Respondents reported that OSSMIG provided superior exposure to MSK medicine and the field of orthopedic surgery (Figure 3).

This improved exposure is likely a result of providing the ability for OSSMIG members to explore the “real world” of MSK medicine. During the preclinical years, these students have limited opportunities outside the classroom and sometimes limited exposure inside as well. In fact, the inclusion of MSK education within the medical school classroom curriculum has been associated with a 12% higher rate of application into orthopedic surgery residency programs.\(^2\)\(^2\)

The Trauma Call experience is an example of one of the

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**Figure 5** Medical students’ experiences and attitudes toward OSSMIG.

**Abbreviation:** OSSMIG, Orthopaedic Surgery and Sports Medicine Interest Group.
OSSMIG programs created to address this deficiency (Table 1). This program has become popular and jointly beneficial— for students, it offers a unique clinical experience and exposure to orthopedics; for the resident, it provides a valuable team member to assist during busy call shifts and the opportunity to teach. These experiences outside the classroom have been shown to help increase student interest. While the establishment and impact of orthopedic medical student interest groups was not found during review of the literature, general surgery interest groups at other institutions have been described and found to be positively received and demonstrate similar benefits. These general surgery interest groups exhibited positive supplemented surgical education, provided opportunities to improve procedural skills, and increased entrance rates into general surgery residency programs threefold.

It appears that an interest group’s impact is highest when it is welcoming to all students, not just dedicated to assisting those pursuing a specific specialty. For an orthopedic interest group, focusing on unique MSK experiences and supportive MSK education in a supplementary fashion may help strengthen the MSK competence and confidence of those students involved in whatever career path they choose.

Limitations and future direction
This study has a number of limitations. The index surveys were issued as part of the group’s quality assurance and improvement processes and were reviewed retrospectively. These were not designed with a specific research question in mind and serial year data were not available for evaluation. Response rate was only 30%. Members were asked about their confidence in MSK medicine, but no competency assessment tool was administered. No comparison data were available from a control group that was not involved in OSSMIG, so correlations are difficult to infer.

The study was performed at a single institution with a large primary care focus, and thus, the study population may not be representative of other medical schools. Specifically, the MSK curriculum, required clerkships, and established support system can vary between schools. Thus, the impact of a dedicated orthopedic interest group may differ.

Lastly, the entire student body was not queried about the adequacy of MSK instruction. Since those surveyed were only OSSMIG members, responders may have bias toward feeling the instruction provided by the medical school curriculum was inadequate and, thus, actively sought out supplementary instruction.

Future studies will focus on assessing pre- and post-competency using an objective assessment measure and comparing this to a matched group of students who are not involved in the interest group. Additional assessments into the reasoning and motivations of the members who switched their focus from orthopedics to another specialty would be advantageous. A national query to investigate what other medical schools are doing would be helpful to see what is effective and if the findings in this and future studies are transferable.

Conclusion
Education in MSK medicine is inadequate within the USA medical school curricula. In concert with several studies evaluating medical school MSK education, it is recommended that medical schools provide more effective preparation and exposure to this field. This can be accomplished by increasing MSK instruction time, providing early clinical experiences, and integrating supplementary education by means of extracurricular interest groups. Since its inception 8 years ago, OSSMIG has been well received and has positively impacted UWSOM students through various interventions. By welcoming students’ interest in both primary care and surgery, it has expanded their exposure to MSK medicine and increased their subjective competence and confidence.

Maintaining strong student leadership and developing a relationship with the institution’s orthopedic surgery department is crucial to enhance the group’s function. An interest group that provides general MSK instruction to all-comers and supportive guidance to those applying to orthopedic surgery appears most effective. The development of similar interest groups at other schools is encouraged. OSSMIG will continue to refine, strengthen, and build its educational offerings, ultimately furthering student interest and success in orthopedic surgery and primary care MSK medicine.

Disclosure
The authors report no conflicts of interest in this work.

References


Memorandum

To: AAOS Resident Delegates
From: RA Executive Committee
CC: Resident Assembly
Date: March 20, 2020
Re: Changes to Resident Assembly Rules and Procedures

Dear Resident Delegates:

As the 2020 AAOS Annual Meeting has been canceled, we will hold our Resident Assembly Business Meeting virtually on Monday, April 20, 2020, at 7:00 PM CT/8:00 PM ET. As a Resident Delegate, part of your responsibility is to review and vote on the following changes to the Rules and Procedures.

If adopted, the proposed Rules would formalize a number of needed changes as outlined below.

With these changes, the Executive Committee has further clarified the voting privileges. Delegates will continue to vote on Advisory Opinions, (Article II, A. 2. b.) and changes to the Rules and Procedures (Article IX, B). The entire Resident Assembly present at the meeting will continue to vote on Members-at-Large (Article II, A. 2. a), and this has been extended International Resident Members (Article II, A. 2. d).

The Resident Assembly now recognizes AOBOS, and Royal College of Physicians of Surgeons of Canada certification, in accordance with AAOS’ membership (Article I, A. 1)

References to the AAOS Emerging Professionals Committee or AAOS Membership and Leader Development Committee have been changed to the AAOS Membership Council in accordance with AAOS’ current governance structure.

Within the Purpose (Article I, B, and, throughout the document), we have expanded the term resident to include fellows in training, and added reference to the AAOS’ strategic plan.

The previously named Technology Committee has been renamed and repurposed as the Innovation Committee (Article I, D. 5 and throughout).
The Resident Member (Article II, A. 2. a) has an expanded definition, and we have added additional information on submitting advisory opinions and workgroup membership. The Resident Member’s voting privileges are now clearly defined.

The Executive Committee has noted that by participating in a committee or workgroup, the Resident Member implies his/her consent to have their email made a part of a contact listserv, to only be used by the members of said listserv. The Resident Assembly will continue to follow the AAOS’ Privacy Policy.

The Resident Delegate’s voting responsibilities are clearly defined. (Article II, A. 2. b).

Medical Students can participate as members of subject matter committees or workgroups (Article II, A. 2. e).

The Residency Program will continue to select its Delegate. (Article II, A. 4). The application, which details the Delegate roles and responsibilities, is signed by the Program Director. The reasons why the Resident Assembly asks that the Residency Program manage the selection process is multi-faceted, and includes the following considerations:

- One of the Delegate’s responsibilities is to attend the AAOS Annual Meeting, and funding for this is the Resident’s, or Program’s, responsibility.
- The Program Director knows who best to have participate, due to the responsibilities noted within the application.
- The Program is informed of the Delegate and role responsibilities.

The Delegate will now assist the Program Director in selecting a replacement (Article II, A. 5. k).

Procedural information, such as the responsibilities of the Committee Chairs and Vice-Chair, and selection of the Committee Chair, will be moved to a separate procedural document (Article IV, C & F; Article V, E-F).

In 2014, the AAOS only allowed for eighteen (18) committee positions for Residents. By allowing all Residents the opportunity to participate, whether as a Delegate, a Committee Member, or during the Resident Assembly Business Meeting, the path to leadership is open to all Residents.
AAOS
American Academy of Orthopaedic Surgeons
American Association of Orthopaedic Surgeons

Resident Assembly

Rules and Procedures
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Resident Assembly

At the 2012 Annual Meeting of the American Academy of Orthopaedic Surgeons (AAOS), an assembly of orthopaedic residents in attendance recommended the creation of a Resident Assembly within the AAOS. The Resident Assembly is an advisory body to the AAOS on issues of importance to orthopaedic residents. In addition, the Resident Assembly is designed as a forum to allow orthopaedic residents to embrace their roles as patient advocates and life-long learners.

Article I: Resident Assembly

A. Name

1. There shall be an AAOS Resident Assembly (“Resident Assembly). The Resident Assembly shall represent all orthopaedic surgery residents who are pursuing ABOS, AOBOS and Royal College of Physicians and Surgeons of Canada certification in the United States and Canada.

2. The Resident Assembly shall have elected officers and leadership committees.

3. The Resident Assembly shall report to and coordinate with the AAOS Membership Council, AAOS Emerging Professionals Committee, AAOS Membership and Leader Development Committee.

B. Purpose

The purpose of the Resident Assembly shall be to:

1. Serve as a representative, deliberative, and advisory body to the AAOS regarding matters of concern to orthopaedic residents and fellows in training;

2. Provide an advisory voice for orthopaedic residents and fellows in training within the AAOS and assist the decision-making bodies of the AAOS with topics pertaining to orthopaedic residents and fellows in training and education;

3. Enhance and maintain communications between the AAOS and orthopaedic residents and fellows in training; facilitate communication and the dissemination of AAOS policy within individual orthopaedic residency and fellowship programs;

4. Encourage increased opportunities for involvement and participation by orthopaedic residents and fellows in training in AAOS educational and research affairs;

4.5. Advance the AAOS strategic plan and initiatives; and

5.6. Consider and make recommendations regarding the AAOS issues as requested.

In each of the above activities, the Resident Assembly will foster greater orthopaedic resident and fellows in training involvement in the AAOS in the anticipation that this engagement will persist beyond the residency and fellowship training years.
C. Duties

The duties of the Resident Assembly shall be to:

1. Assist in the execution and implementation of AAOS initiatives;
2. Serve as a conduit for the AAOS to provide information and resources to members and residency and fellowship programs and their trainees information and resources;
3. Identify and communicate the issues and concerns of orthopaedic residents to the AAOS;
4. Develop recommendations on AAOS policies, activities and programs upon request;
5. Facilitate orthopaedic resident and fellows in training involvement within the AAOS;
6. Develop Resident Assembly Advisory Opinions to be submitted to the AAOS Candidate, Resident and Fellows Membership Council and Leader Development Committee;
7. Provide other advice, as requested and as appropriate, to the AAOS Board of Directors, Councils and Cabinets, Committees and Project Teams; and
8. Evaluate on a regular basis the goals, objectives, structure and accomplishments of the Resident Assembly.

D. On-going Issues

The Resident Assembly will address a range of issues, through standing committees, to be reviewed and approved by the AAOS Emerging Professionals Committee on an annual basis. These issues will include the following aspects of orthopaedic residency and fellowship training:

1. Career Development: Provide information on building a career in orthopaedics, including fellowship and employment opportunities.
2. Education: Review existing educational resources and recommend new offerings, as well as provide educational opportunities for residents.
3. Research: Promote research opportunities and the use of AAOS quality tools.
4. Health Policy: Address advocacy issues impacting the field of orthopaedic surgery and orthopaedic residency training.
5. Technology Innovation: Identify, develop, test or promote new technologies to facilitate resident productivity and education or to and optimize healthcare delivery. Empower the AAOS to engage with residents and fellows in training in the pursuit and refinement of new technologies to create and further educational opportunities.

E. Administration and Funding

The Resident Assembly will be administered and funded by the AAOS. No member of the Resident Assembly may negotiate or finalize contracts in any business transaction, or act as an agent or spokesperson for the AAOS in accordance with AAOS policies.
Article II: Membership of the Resident Assembly

A. Membership

1. The Resident Assembly is comprised of all active orthopaedic residents and fellows in training in good standing with their respective orthopaedic surgery residency or fellowship programs.

2. There will be five classes of membership in the Resident Assembly: Resident Member, Resident Delegate, Emeritus Member, International Member, and Medical Student Member.

   a. Resident Member - All orthopaedic residents and fellows in training currently enrolled in an approved orthopaedic surgery residency or fellowship program in the United States and Canada are automatically considered to be Resident Assembly Resident Members. This category of membership is provided to both MD and DO trainees. Resident Members have access to Resident Assembly information and resources through the AAOS website. Resident Members may propose new initiatives or by submitting Advisory Opinions for consideration by the Resident Assembly and its committees through either their respective orthopaedic residency program’s Resident Delegate or with 20 resident member signatures. Throughout the year, Resident Members may participate in any of the standing Resident Assembly Subject Matter Committees or workgroups.

   b. Resident Delegate - A Resident Delegate is a member appointed by his or her orthopaedic residency program at the discretion of its Program Director to represent that program and his/her fellow residents at the Resident Assembly Annual Meeting. Each orthopaedic residency program will have one vote on any given issue Advisory Opinions, and other issues brought forth to the Resident Assembly, cast by its Resident Delegate at the AAOS Annual Meeting. Should the Resident Delegate be unable to attend a meeting a substitute may be appointed by the orthopaedic residency Program Director. Notifications of substitutions shall be submitted no less than 14 days prior to the meeting. The individual orthopaedic residency program is responsible for funding the attendance of its Resident Delegate to the Resident Assembly Annual Meeting and confirming the Resident Delegate’s understanding of his/her responsibilities.

   c. Emeritus Member -- An Emeritus Member is a practicing orthopaedic surgeon that
has served on an AAOS Resident Assembly Committee or on the AAOS Resident Assembly Executive Committee and wishes to be involved in the AAOS Resident Assembly as a mentor. The Emeritus Member status is available for a maximum of five years after the completion of residency and fellowship training.

Emeritus AAOS Resident Assembly Members do not have voting privileges.

d. International Resident Member - Any orthopaedic resident enrolled in an approved international residency program and interested in participating in the Resident Assembly Annual Meeting may do so as an International Member. International Members do not have voting privileges can vote as a part of the Resident Assembly.

e. Medical Student Member - Any medical student planning to apply to residency in orthopaedic surgery within the United States of America or Canada interested in participating in the Annual Meeting of the Resident Assembly may do so as a Medical Student Member. Medical Student Members do not have voting privileges, but may participate as members of a standing committee or workgroup.

3. All Resident Assembly members shall have access to the Resident Assembly materials at prior to the Resident Assembly Annual Meeting.

4. Selection of Resident Delegates

a. Each orthopaedic residency program may identify one member to represent the respective program as its Resident Delegate. The selection of the Resident Delegate will be determined on a program-by-program basis, but must occur prior to the annual meeting. The term of the Resident Delegate will continue for a period of two years or graduation, whichever is sooner, until the resident's graduation from residency unless the resident or program chooses to end their term prior to this date.

b. Each orthopaedic residency program shall establish its own procedures to select its Resident Delegate; however, it is recommended that selection should involve other trainees. The orthopaedic residency program director is responsible for notifying the AAOS of its chosen delegate. The orthopaedic residency program is responsible for notifying the AAOS of its chosen delegate and confirming the Resident Delegate’s understanding of his/her responsibilities. The Resident Assembly Executive Committee will monitor term lengths and notify delegates and participating programs of impending term expiration.

c. The Resident Delegate and his/her respective orthopaedic residency program are responsible for funding the Resident Delegate's travel to the Resident Assembly Annual Meeting.

d. If a Resident Delegate becomes an Officer of the Resident Assembly, that individual shall be deemed to have resigned from his or her Resident Delegate position and his or her respective orthopaedic residency program shall appoint a new Resident Delegate to attend and participate in the Resident Assembly Annual Meeting. If a program is unable to fund the travel of a second resident to the Resident Assembly business meeting, the new officer can serve the dual role as a
Resident Delegate for voting purposes at the Annual Meeting.

5. Responsibilities of the Resident Delegate

The Resident Delegate shall:

a. Attend the Resident Assembly Annual Meeting at the AAOS Annual Meeting as the voting representative for his or her orthopaedic residency program;

b. Encourage fellow residents to get involved in the AAOS;

c. Identify one or more Resident Assembly Committees in which to participate during the duration of their term;

d. Reply to Resident Assembly communication requests that require votes or input on various issues and advisory opinions;

e. Communicate about the Resident Assembly Annual Meeting as well as any additional conferences or meetings held throughout the year to their respective orthopaedic residency program;

f. Receive and distribute correspondence and presentations from the Resident Assembly and AAOS to residents in their orthopaedic residency programs;

g. Encourage other orthopaedic residents to complete any AAOS surveys;

h. Be knowledgeable about this document and comply with all Resident Assembly Rules and Procedures.

i. Submit Advisory Opinions and debate Advisory Opinions.

j. Advise their Resident Assembly committee of any issues or concerns of their respective orthopaedic residency program.

j-k. Assist their program director in selecting a replacement delegate upon term expiration to ensure continuous representation of their residency.

Article III: Resident Assembly Standing Committees

The Resident Assembly shall have seven standing committees: the Executive Committee, the Nominating Committee, and the five Subject Matter Committees (Article IV).

A. Executive Committee

1. The Executive Committee shall be the primary governing body of the Resident Assembly. All other Resident Assembly committees report to the Executive Committee. The Resident Assembly Executive Committee shall report to the AAOS Membership Council, Emerging Professionals Committee, Membership and Leader Development Committee.

2. The Resident Assembly Executive Committee will be comprised of three officers (Chair, Vice-Chair, Past-Chair), five Subject Matter Committee Chairs, and two At-Large Members, selected in accordance with these Rules and Procedures.
3. Election of At-Large Members of the Executive Committee

   a. Any Resident Delegate or a Resident Member who has served one year or more on a Resident Assembly committee may submit a nomination to serve as an At-Large Member of the Resident Assembly Executive Committee.

   b. At-Large Members for the upcoming year will be elected by the Resident Assembly at the Resident Assembly Annual Meeting by a majority vote of the Resident Members and Resident Delegates in attendance.

   b.c. At-Large Members of the Executive Committee serve as the liaison between Resident Delegates, Resident Members and the Executive Committee.

4. Election of Officers and Subject Matter Committee Chairs shall be in accordance with the provisions of Article V herein below.

B. Nominating Committee

   1. The Nominating Committee shall be charged with selecting the Chair and Vice-Chair of the Resident Assembly by majority vote prior to the Annual Meeting.

   2. The Nominating Committee shall be composed of the Chair of the AAOS EmergingAAOS Membership Council and Leader Development Committee Professionals Committee who will serve as Chair of the Nominating Committee, the Resident Assembly Chair, and one additional AAOS member appointed by the Chair of the AAOS Emerging Professionals Membership Council and Leader Development Committee.

   3. Eligible candidates for the Chair and Vice Chair positions must have previously served on the previous year’s Executive Committee for at least one year, and must provide approval from their respective residency programs. The Nominating Committee selection will consider the involvement, contributions, and leadership qualities of each candidate.

   4. The Nominating Committee will publicly announce its selection of the Chair and Vice-Chair during the AAOS Annual Meeting.

   5. The Nominating Committee will also vet and narrow the pool of applications for Members At-Large prior to a vote by the Resident Assembly.

   6. The Nominating Committee will meet as necessary to fulfill its duties set forth herein.

Article IV: Resident Assembly Subject Matter Committees

A. The Resident Assembly will maintain a committee structure to address topics of interest to the AAOS and orthopaedic residents. This will include the following Subject Matter Committees: Career Development, Education, Research, Health Policy, and TechnologyInnovation.

B. Each committee will be led by a Committee Chair. The committees will report to the Resident Assembly Executive Committee.

   C. Committee Chairs and Committee members may participate in AAOS activities within the
D.C. Orthopaedic residents serving on AAOS committees, councils, and cabinets appointed through the Committee Appointment Program (CAP) process are strongly encouraged to participate in the AAOS Resident Assembly and Subject Matter Committees related to their CAP-appointment. All Resident Assembly Subject Matter Committee chairs shall communicate with their related CAP residents on a regular basis. CAP-appointed residents are allowed to also serve any role within the Resident Assembly, including Subject Matter Committee Chair, strongly encouraged to participate in and to run for Chair of the equivalent Resident Assembly Committee. At the least, All Resident Assembly Subject Matter Committee chairs shall communicate with their related CAP residents on a regular basis. Likewise all CAP-appointed residents will be encouraged to participate in the respective Resident Assembly Committee on a regular basis.

At the discretion of the Chair of the Executive Committee may appoint workgroups to address time limited projects.

__E.D.__ Terms of Subject Matter Committee Members

1. Resident Delegates or Resident Members may volunteer to serve as a voting member on any Resident Assembly Subject Matter Committee at any time throughout the year by notifying the Committee Chair Resident Assembly.

2. Resident Delegates or Resident Members serving on a Resident Assembly Subject Matter Committee may remain on the committee throughout their residency and fellowship. They can choose to remove themselves from the committee prior to the end of their training by contacting the committee chair or staff liaison Resident Assembly.

3. Resident Delegates, Resident Members, Emeritus Members, International Members, and Medical Student Members are eligible welcome to attend Subject Matter Committee meetings in which they are not a voting member.

F.E. Subject Matter Committee Chairs

1. After serving one year on a Resident Assembly Subject Matter Committee, a Resident Member or Resident Delegate is eligible to serve as that committee’s Chair for the following year.

   Resident Delegates and all Resident Assembly Members (even if they are not Resident Delegates) may serve as members of a Resident Assembly Subject Matter Committee.
2. **Current members of each Subject Matter Committee elect the incoming Committee Chair from among its own eligible Resident and Delegate Members. A majority of Resident Delegate and Resident Members present and voting determines the new Chair.**

3. The Committee Chair position is a one-year term, subject to possible re-election for an additional one-year term.

4. Should a Committee Chair need to withdraw during the year, the vacancy will be posted on the AAOS website and another Committee member will be selected as Interim-Chair by the Executive Committee until the next Resident Assembly Annual Meeting.

5. **If a Committee Chair is unable to attend a Committee meeting, the Committee Chair will delegate Committee Chair responsibilities to a Committee member.**

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**F. Selection of Committee Chairs shall be in accordance with the Resident Assembly Policies and Procedures manual.**

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Current members of each Subject Matter Committee elect the incoming Committee Chair from among its own eligible Resident and Delegate Members.

To be eligible to vote, Resident and Delegate Members must have been a Member of the Subject Matter Committee by November 1st of the academic year (e.g. November 1st, 2018 for the 2019 election).

The Committee Chair applications of all Committee Chair applicants will be shared via an email from the Committee Liaison to the Subject Matter Committee members at least one week prior to the Committee Chair Election.

The current Committee Chair will hold a conference call for the selection of the new Committee Chair. This conference call will occur at least one week after the announcement of the new Resident Assembly Chair and Vice-Chair positions but prior to AAOS Annual Meeting.

During the conference call, each applicant will be introduced by the current Committee Chair and will discuss his or her qualifications and goals for the position. At the discretion of the Committee Chair, other Subject Matter Committee issues may be addressed during the conference call as well.

Scheduling of the conference call will prioritize availability of the Committee Chair applicants. In the event that an applicant is unable to attend the conference call, he or she may have a stand-in or the current Committee Chair read a speech on his or her behalf.

An electronic survey will be distributed to the participants of the conference call at the conclusion of the call and will remain open for 48 hours. The applicant with the most votes will be selected as the incoming Committee Chair.

If a Subject Matter Committee member is unable to attend the conference call, he or she may have another Resident Member from his or her residency program attend the
The current Committee Chair and the incoming Committee Chair, if different people, will have a formal discussion prior to AAOS Annual Meeting to facilitate a smooth Subject Matter Committee transition.

5. In the event that there is only one applicant to the Committee Chair position, the Committee Chair application will still be shared with the Committee members via email but the conference call vote will be forgone.

Article V: Resident Assembly Officers

A. The Resident Assembly Officers shall be the Chair, Vice-Chair, and Past Chair. The Chair and Vice-Chair will be selected by the Nominating Committee prior to the AAOS Annual Meeting.

B. The term of office is one year, which shall commence at the conclusion of the AAOS Annual Meeting after approval by the Nominating Committee.

C. A vacancy in the position of Vice-Chair or Chair will be filled by the Emerging Professionals Nominating Committee.

D. Chair. The Chair shall preside over meetings of the Resident Assembly Annual Meeting and the Executive Committee without privilege of voting except to break a tie vote. The Chair of the Resident Assembly shall serve as the official voice of the Resident Assembly in communications with AAOS as well as the official liaison to other AAOS entities.

1. In the absence of the Chair at a meeting of the Resident Assembly or Executive Committee, the Vice-Chair will fulfill these duties.

E. Vice-Chair. The Vice-Chair will work with AAOS staff to ensure that the Resident Assembly follows the rules set out herein.

1. Agendas for all Resident Assembly meetings are prepared;
2. Proceedings of the Resident Assembly Annual Meeting are available to the Resident Assembly Resident Delegates and Resident Members;
3. All correspondence, communication, and record keeping of the Resident Assembly and Executive Committee, including maintaining these Rules and Procedures, are completed; and
4. Proper and fair appointments for positions within the Resident Assembly have occurred.
5. All Resident Assembly documents are accurate and kept up to date.

F. Past Chair. The Past Chair will serve in an advisory role to assist in the transition with the new leadership of the Resident Assembly.

1. Act as Chair of a workgroup as needed;
2. Participate in Resident Assembly conference calls and Resident Assembly officer planning sessions; and
3. Assist and advise the Chair upon request.

Article VI: Resident Assembly at the AAOS Annual Meeting

A. The Resident Assembly Annual Meeting shall occur during the AAOS Annual Meeting. The Resident Assembly provides a chance for orthopaedic surgery residents and fellows in training to meet to discuss issues, review previous efforts, and plan for the future of the Resident Assembly.
Assembly. In addition, elections for At-Large members of the Executive Committee will be determined for the upcoming year.

B. Proposed Advisory Opinions. Resident Delegates and Resident Members may submit proposed Advisory Opinions to the Vice-Chair for consideration at these meetings. An Advisory Opinion is a formal resolution from the Resident Assembly. It is not a product of a systematic review, but rather results from deliberation and votes taken at the Resident Assembly Annual Meeting.

C. Voting and Dissemination

1. The Officers will oversee all voting, including election of At-Large members of the Executive Committee and on Advisory Opinions at the Resident Assembly Annual Meeting. They will tally votes from Resident Members and Resident Delegates.

2. In the event of a tie in a vote on Advisory Opinions, the Resident Assembly Chair will cast the deciding vote or, at his or her discretion, decide to table an Advisory Opinion for further review and consideration at a future meeting.

2.3. A list of all Advisory Opinions adopted by the Resident Assembly will be compiled and submitted to the AAOS Emerging Professionals Committee, Membership and Leadership Development Committee, and Membership Council.

3.4. Minutes of the Resident Assembly Annual Meeting will be prepared and distributed to the Executive Committee and Resident Delegates shortly after the Resident Assembly Annual Meeting for dissemination to interested parties.

Article VIII: Parliamentary Authority

All meetings of the Resident Assembly, Executive Committee and Subject Matter Committees shall be governed by standard parliamentary procedures that provide for adequate notice and a fair opportunity for debate. The Presiding Officer may be guided by, but not bound by, the most current edition of Robert’s “Rules of Order.”

Article IX: Amendments

A. The Resident Assembly may find it necessary to recommend changes to these Rules and Procedures to better meet the Resident Assembly’s purpose.

B. Changes to these Rules and Procedures may be proposed by the Executive Committee or any five (5) Resident Delegates no later than sixty (60) days prior to the Resident Assembly Annual Meeting. Notice of these proposed changes must be provided to all Resident Delegates at least thirty (30) days prior to the Resident Assembly Annual Meeting. A revision of these Rules and Procedures requires a two-thirds vote of those Resident Delegates present and voting at the Annual Meeting.

C. After being adopted by a two-thirds vote at the Annual Meeting of the Resident Assembly, the proposed Rules and Procedures must be approved by the AAOS Emerging Professionals Committee, Membership Council, and Leadership Development Committee; and AAOS Board of Directors in order to become effective.

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Approved by the AAOS Board of Directors on September 15, 2017.
Approved by the Resident Assembly Membership and Leader Development Committee on August 1,
2019
Approved by the Emerging Professionals Committee on April 10, 2019
Approved by the Resident Assembly Delegates on March 14, 2019
on March 16, 2017.
RESIDENT ASSEMBLY ORGANIZATION

Executive

Officer

5 Subject Matter Committee Chairs

2 At-Large

Past

Chair
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Article VIII: Amendments
Resident Assembly

At the 2012 Annual Meeting of the American Academy of Orthopaedic Surgeons (AAOS), an assembly of orthopaedic residents in attendance recommended the creation of a Resident Assembly within the AAOS. The Resident Assembly is an advisory body to the AAOS on issues of importance to orthopaedic residents. In addition, the Resident Assembly is designed as a forum to allow orthopaedic residents to embrace their roles as patient advocates and life-long learners.

Article I: Resident Assembly

A. Name

1. There shall be an AAOS Resident Assembly (“Resident Assembly). The Resident Assembly shall represent all orthopaedic surgery residents who are pursuing ABOS, AOBOS and Royal College of Physicians and Surgeons of Canada certification in the United States and Canada.

2. The Resident Assembly shall have elected officers and leadership committees.

3. The Resident Assembly shall report to and coordinate with the AAOS Membership Council

B. Purpose

The purpose of the Resident Assembly shall be to:

1. Serve as a representative, deliberative, and advisory body to the AAOS regarding matters of concern to orthopaedic residents and fellows in training;

2. Provide an advisory voice for orthopaedic residents and fellows in training within the AAOS and assist the decision-making bodies of the AAOS with topics pertaining to orthopaedic residents and fellows in training;

3. Enhance and maintain communications between the AAOS and orthopaedic residents and fellows in training; facilitate communication and the dissemination of AAOS policy within individual orthopaedic residency and fellowship programs;

4. Encourage increased opportunities for involvement and participation by orthopaedic residents and fellows in training in AAOS affairs;

5. Advance the AAOS strategic plan and initiatives

6. Consider and make recommendations regarding AAOS issues as requested.

7. In each of the above activities, the Resident Assembly will foster greater
orthopaedic resident and fellow involvement in the AAOS in the anticipation that this engagement will persist beyond the training years.

C. Duties

The duties of the Resident Assembly shall be to:

1. Assist in the execution and implementation of AAOS initiatives;

2. Serve as a conduit for the AAOS to provide information and resources to residency and fellowship programs and their trainees;

3. Identify and communicate the issues and concerns of orthopaedic residents to the AAOS;

4. Develop recommendations on AAOS policies, activities and programs upon request;

5. Facilitate orthopaedic resident and fellow in training involvement within the AAOS;

6. Develop Resident Assembly Advisory Opinions to be submitted to the AAOS Membership Council;

7. Provide other advice, as requested and as appropriate, to the AAOS Board of Directors, Councils and Cabinets, Committees and Project Teams;

8. Evaluate on a regular basis the goals, objectives, structure and accomplishments of the Resident Assembly.

D. On-going Issues

The Resident Assembly will address a range of issues through standing committees. These issues will include the following aspects of orthopaedic residency and fellowship training:

1. Career Development: Provide information on building a career in orthopaedics, including fellowship and employment opportunities.

2. Education: Review existing educational resources and recommend new offerings; and provide educational opportunities for residents.

3. Research: Promote research opportunities and the use of AAOS quality tools.

4. Health Policy: Address advocacy issues that impact the field of orthopaedic surgery and orthopaedic residency training.
5. **Innovation:** Empower the AAOS to engage with residents and fellows in training in the pursuit and refinement of new technologies to create and further educational opportunities.

E. **Administration and Funding**

The Resident Assembly will be administered and funded by the AAOS. No member of the Resident Assembly may negotiate or finalize contracts in any business transaction, or act as an agent or spokesperson for the AAOS in accordance with AAOS policies.

**Article II: Membership of the Resident Assembly**

A. **Membership**

1. The Resident Assembly is comprised of all active orthopaedic residents and fellows in training in good standing with their respective orthopaedic surgery residency or fellowship programs.

2. There will be five classes of membership in the Resident Assembly: Resident Member, Resident Delegate, Emeritus Member, International Member, and Medical Student Member.

   a. **Resident Member** - All orthopaedic residents and fellows in training currently enrolled in an orthopaedic surgery residency or fellowship program in the United States and Canada are automatically considered Resident Assembly Resident Members.

   Resident Members may propose new initiatives by submitting Advisory Opinions for consideration by the Resident Assembly and its committees through either their respective orthopaedic residency program’s Resident Delegate or with 20 resident member signatures.

   Throughout the year, Resident Members may participate in any of the standing Resident Assembly Subject Matter Committees or workgroups.

   Resident Members may attend the Resident Assembly Annual Meeting. Resident members can vote on Members-at-Large on the Executive Committee, and vote to elect the Chairs of Committees on which they sit.

   By participating in a standing committee or workgroup, the Resident Member implies his/her consent to have their e-mail made a part of a contact listserv for the Committee Chair and the Resident Assembly Executive Committee.
b. **Resident Delegate** - A Resident Delegate is a member appointed by his or her orthopaedic residency program at the discretion of its Program Director to represent that program and his/her fellow residents.

Each orthopaedic residency program will have one vote on Advisory Opinions, and other issues brought forth to the Resident Assembly, cast by its Resident Delegate at the AAOS Annual Meeting.

Should the Resident Delegate be unable to attend, a substitute may be appointed by the orthopaedic residency Program Director. Notifications of substitutions shall be submitted no less than 14 days prior to the meeting.

c. **Emeritus Member** - An Emeritus Member is a practicing orthopaedic surgeon that has served on an AAOS Resident Assembly Committee or on the AAOS Resident Assembly Executive Committee and wishes to be involved in the AAOS Resident Assembly as a mentor.

Emeritus AAOS Resident Assembly Members do not have voting privileges.

d. **International Resident Member** - Any orthopaedic resident enrolled in an approved international residency program and interested in participating in the Resident Assembly may do so as an International Member.

International Members can vote as a part of the Resident Assembly.

e. **Medical Student Member** - Any medical student planning to apply to residency in orthopaedic surgery within the United States of America or Canada interested in participating in the Resident Assembly may do so as a Medical Student Member.

Medical Student Members do not have voting privileges, but may participate as members of a standing committee or workgroup.

3. All Resident Assembly members shall have access to Resident Assembly materials prior to the Resident Assembly Annual Meeting.

4. **Selection of Resident Delegates**

   a. Each orthopaedic residency program may identify one member to represent the respective program as its Resident Delegate. The selection of the Resident Delegate will be determined on a program-by-program basis but must occur prior to the annual meeting. The
term of the Resident Delegate will continue for a period of two years or graduation, whichever is sooner, unless the resident or program chooses to end their term prior to this date.

b. Each orthopaedic residency program shall establish its own procedures to select its Resident Delegate; however, it is recommended that selection should involve other trainees. The orthopaedic residency program is responsible for notifying the AAOS of its chosen delegate and confirming the Resident Delegate’s understanding of his/her responsibilities. The Resident Assembly Executive Committee will monitor term lengths, and notify delegates and participating programs of impending term expiration.

c. The Resident Delegate and his/her respective orthopaedic residency program are responsible for funding the Resident Delegate’s travel to the Resident Assembly Annual Meeting.

d. If a Resident Delegate becomes an Officer of the Resident Assembly, that individual shall be deemed to have resigned from his or her Resident Delegate position and his or her respective orthopaedic residency program shall appoint a new Resident Delegate to participate in the Resident Assembly. If a program is unable to fund the travel of a second resident to the Resident Assembly business meeting, the new officer can serve the dual role as a Resident Delegate for voting purposes at the Annual Meeting.

5. Responsibilities of the Resident Delegate

The Resident Delegate shall:

a. Attend the Resident Assembly Annual Meeting at the AAOS Annual Meeting as the voting representative for his or her orthopaedic residency program;

b. Encourage fellow residents to get involved in the AAOS;

c. Identify one or more Resident Assembly Committees in which to participate during the duration of their term;

d. Reply to Resident Assembly communication requests that require votes or input on various issues and advisory opinions;

e. Communicate about the Resident Assembly Annual Meeting as well as any additional conferences or meetings held throughout the year to their respective orthopaedic residency program;

f. Receive and distribute correspondence and presentations from the
Resident Assembly and AAOS to residents in their orthopaedic residency programs;

g. Encourage other orthopaedic residents to complete any AAOS surveys;

h. Be knowledgeable about this document and comply with all Resident Assembly Rules.

i. Submit and debate Advisory Opinions.

j. Advise their Resident Assembly committee of any issues or concerns of their respective orthopaedic residency program.

k. Assist their program director in selecting a replacement delegate upon term expiration to ensure continuous representation of their residency.

Article III: Resident Assembly Standing Committees

The Resident Assembly shall have seven standing committees: the Executive Committee, the Nominating Committee, and the five Subject Matter Committees (Article IV).

A. Executive Committee

1. The Executive Committee shall be the primary governing body of the Resident Assembly. All other Resident Assembly committees report to the Executive Committee. The Resident Assembly Executive Committee shall report to the AAOS Membership Council.

2. The Resident Assembly Executive Committee will be comprised of three officers (Chair, Vice-Chair, Past-Chair), five Subject Matter Committee Chairs, and two At-Large Members, selected in accordance with these Rules.

3. At-Large Members of the Executive Committee

   a. Any Resident Delegate or a Resident Member who has served on a Resident Assembly committee may submit a nomination to serve as an At-Large Member of the Resident Assembly Executive Committee.

   b. At-Large Members for the upcoming year will be elected by the Resident Assembly at the Resident Assembly Annual Meeting by a majority vote of the Resident Members and Resident Delegates in attendance.

   c. At-Large Members of the Executive Committee serve as the liaison between Resident Delegates, Resident Members and the Executive
Committee.

4. Election of Officers and Subject Matter Committee Chairs shall be in accordance with the provisions of Article V herein below.

B. Nominating Committee

1. The Nominating Committee shall be charged with selecting the Chair and Vice-Chair of the Resident Assembly by majority vote prior to the Annual Meeting.

2. The Nominating Committee shall be composed of the Chair of the AAOS Membership Council who will serve as Chair of the Nominating Committee, the Resident Assembly Chair, and one additional AAOS member appointed by the Chair of the AAOS Membership Council.

3. Eligible candidates for the Chair and Vice Chair positions must have previously served on the Executive Committee for at least one year, and must provide approval from their respective residency programs. The Nominating Committee will consider the involvement, contributions, and leadership qualities of each candidate.

4. The Nominating Committee will publicly announce its selection of the Chair and Vice-Chair during the AAOS Annual Meeting.

5. The Nominating Committee will also vet and narrow the pool of applications for Members At-Large prior to a vote by the Resident Assembly.

6. The Nominating Committee will meet as necessary to fulfill its duties set forth herein.

Article IV: Resident Assembly Subject Matter Committees

A. The Resident Assembly will maintain a committee structure to address topics of interest to the AAOS and orthopaedic residents. This will include the following Subject Matter Committees: Career Development, Education, Research, Health Policy, and Innovation.

B. Each committee will be led by a Committee Chair. The committees will report to the Resident Assembly Executive Committee.

C. Orthopaedic residents serving on AAOS committees, councils, and cabinets appointed through the Committee Appointment Program (CAP) process are strongly encouraged to participate in the AAOS Resident Assembly and Subject
Matter Committees related to their CAP-appointment. All Resident Assembly Subject Matter Committee chairs shall communicate with their related CAP residents on a regular basis. CAP-appointed residents are allowed to also serve any role within the Resident Assembly, including Subject Matter Committee Chair.

D. The Chair of the Executive Committee may appoint workgroups to address time limited projects.

E. Terms of Subject Matter Committee Members

1. Resident Delegates or Resident Members may volunteer to serve as a voting member on any Resident Assembly Subject Matter Committee at any time throughout the year by notifying the Resident Assembly.

2. Resident Delegates or Resident Members serving on a Resident Assembly Subject Matter Committee will remain on the committee throughout their residency and fellowship. They can choose to remove themselves from the committee prior to the end of their training by contacting the Resident Assembly.

3. Resident Delegates, Resident Members, Emeritus Members, International Members, and Medical Student Members are eligible to attend Subject Matter Committee meetings in which they are not a voting member.

F. Subject Matter Committee Chairs

1. After serving on a Resident Assembly Subject Matter Committee, a Resident Member or Resident Delegate is eligible to serve as that committee’s Chair. Resident Delegates and all Resident Assembly Members may serve as members of a Resident Assembly Subject Matter Committee.

2. The Committee Chair position is a one-year term, subject to possible re-election for an additional one-year term.

3. Should a Committee Chair need to withdraw during the year, another Committee member will be selected as Interim-Chair by the Executive Committee until the next Resident Assembly Annual Meeting.

4. If a Committee Chair is unable to attend a Committee meeting, the Committee Chair will delegate Committee Chair responsibilities to a Committee member.

5. Selection of Committee Chairs shall be in accordance with the Resident Assembly Policies and Procedures manual.
Article V: Resident Assembly Officers

A. The Resident Assembly Officers shall be the Chair, Vice-Chair, and Past Chair. The Chair and Vice-Chair will be selected by the Nominating Committee prior to the AAOS Annual Meeting.

B. The term of office is one year, which shall commence at the conclusion of the AAOS Annual Meeting after approval by the Nominating Committee.

C. A vacancy in the position of Vice-Chair or Chair will be filled by the Nominating Committee.

D. Chair. The Chair shall preside over meetings of the Resident Assembly Annual Meeting and the Executive Committee without privilege of voting except to break a tie vote. The Chair of the Resident Assembly shall serve as the official voice of the Resident Assembly in communications with AAOS as well as the official liaison to other AAOS entities.

In the absence of the Chair at a meeting of the Resident Assembly or Executive Committee, the Vice-Chair will fulfill these duties.

E. Vice-Chair. The Vice-Chair will work with AAOS staff to ensure that the Resident Assembly follows the rules set out herein.

F. Past Chair. The Past Chair will serve in an advisory role to assist in the transition with the new leadership of the Resident Assembly.

Article VI: Resident Assembly at the AAOS Annual Meeting

A. The Resident Assembly Annual Meeting shall occur during the AAOS Annual Meeting. The Resident Assembly provides a chance for orthopaedic surgery residents and fellows in training to meet to discuss issues, review previous efforts, and plan for the future of the Resident Assembly. In addition, elections for At-Large members of the Executive Committee will occur for the upcoming year.

B. Resident Delegates and Resident Members may submit proposed Advisory Opinions to the Vice-Chair for consideration at these meetings. An Advisory Opinion is a formal resolution from the Resident Assembly.

C. Voting and Dissemination

1. The Officers will oversee all voting at the Resident Assembly Annual Meeting.

2. In the event of a tie in a vote on Advisory Opinions, the Resident Assembly Chair will cast the deciding vote or, at his or her discretion, decide to table an Advisory Opinion for further review and consideration at a future meeting.
3. A list of all Advisory Opinions adopted by the Resident Assembly will be compiled and submitted to the AAOS Membership Council.

4. Minutes of the Resident Assembly Annual Meeting will be prepared and distributed to the Executive Committee and Resident Delegates after the Resident Assembly Annual Meeting for dissemination to interested parties.

**Article VII: Parliamentary Authority**

All meetings of the Resident Assembly shall be governed by standard parliamentary procedures that provide for adequate notice and a fair opportunity for debate.

**Article VIII: Amendments**

A. The Resident Assembly may find it necessary to recommend changes to these Rules to better meet the Resident Assembly’s purpose.

B. Changes to these Rules may be proposed by the Executive Committee or any five (5) Resident Delegates no later than sixty (60) days prior to the Resident Assembly Annual Meeting. Notice of these proposed changes must be provided to all Resident Delegates at least thirty (30) days prior to the Resident Assembly Annual Meeting. A revision of these Rules and Procedures requires a two-thirds vote of those Resident Delegates present and voting at the Annual Meeting.

C. After being adopted by a two-thirds vote at the Annual Meeting of the Resident Assembly, the proposed Rules and Procedures must be approved by the Membership Council and AAOS Board of Directors in order to become effective.

Updated and submitted to the Resident Assembly in March, 2020.
Not approved by the Board of Directors on September 20, 2019
Approved by the Membership and Leader Development Committee on August 1, 2019
Approved by the Emerging Professionals Committee on April 10, 2019
Approved by the Resident Assembly Delegates on March 14, 2019
RESIDENT ASSEMBLY ORGANIZATION

Executive Committee Officers

- 5 Subject Matter Committee Chairs
- 2 At-Large Members
- Vice-Chair
- Past Chair
- Chair
- Past Chair
Resident Assembly Executive Committee
Member-at-Large

For your information, below is Article III, Section A of the AAOS Resident Assembly Policies and Procedures.

Article III Executive Committee

The Executive Committee shall be the primary governing body of the Resident Assembly. All other Resident Assembly committees report to the Executive Committee. The Resident Assembly Executive Committee shall report to the AAOS Emerging Professionals Committee.

The Resident Assembly Executive Committee will be comprised of three officers (Chair, Vice-Chair, Past-Chair), five Subject Matter Committee Chairs, and two At-Large Members, selected in accordance with these Rules and Procedures.

Election of At-Large Members of the Executive Committee

Any Resident Delegate or a Resident Member who has served one year or more on a Resident Assembly committee may submit a nomination to serve as an At-Large Member of the Resident Assembly Executive Committee.

At-Large Members for the upcoming year will be elected by the Resident Assembly at the Resident Assembly Annual Meeting by a majority vote of Resident Members and Resident Delegates in attendance.
Resident Assembly Executive Committee
Member-at-Large Responsibilities

Background

The AAOS Resident Assembly is an advisory body to the AAOS on issues of importance to orthopaedic residents. In addition, the AAOS Resident Assembly is designed as a forum to allow orthopaedic residents to embrace their roles as patient advocates and lifelong learners.

Responsibilities

- Produce reports to the Emerging Professionals Committee
- Attend the AAOS Resident Assembly Annual Meeting at the AAOS Annual meeting
- Participate and encourage fellow residents to get involved in the AAOS
- Reply to AAOS Resident Assembly requests requiring votes or input on various issues and action items
- Communicate about the AAOS Resident Assembly Annual Meeting as well as any additional conferences or meetings held throughout the year to their respective orthopaedic residency program
- Receive and distribute correspondence from the AAOS Resident Assembly and AAOS to residents in his/her orthopaedic residency programs
- Encourage orthopaedic residents to complete any AAOS surveys
- Be knowledgeable about and comply with the Resident Assembly Policies and Procedures
- Advise the executive committee of any issues or concerns of respective residency program
- Provide timely and relevant feedback, opinions and ideas to the AAOS on requested projects and programs

Term

One year to commence at the conclusion of the AAOS Annual Meeting.

Eligibility

Resident Assembly delegates and members must have served for at least one year as a member of a Resident Assembly committee.

Commitment

Members-at-Large should expect to commit approximately 50 hours each year to the Resident Assembly.

- AAOS Resident Assembly Annual Meeting at the AAOS Annual Meeting
- Executive Committee Meeting at the AAOS Annual Meeting
- Open Forum at the AAOS Annual Meeting
- National Orthopaedic Leadership Conference (3 days)
- Fall Meeting (2 days)

Revised 10.18.2018
- Approximately 6 conference calls per year
- Approximately 2 webinars per year
- Preparation and review time prior to conference calls and the Annual Meeting
- Completion of surveys or focus groups
- Correspondence to fellow residents on AAOS and Resident Assembly issues
- Produce reports to Candidate, Resident and Fellow Committee
**Resident Assembly Executive Committee**  
**Member-at-Large Nomination Form**

As noted in the AAOS Resident Assembly Policies and Procedures, the Executive Committee Member-at-Large applicants nominate themselves, and are selected by the Resident Assembly.

Below, enter your information.

<table>
<thead>
<tr>
<th>Your Name</th>
<th>Austin Beason</th>
<th>PGY Year</th>
<th>2</th>
</tr>
</thead>
</table>
| Prior Resident Assembly position | 1. Resident Delegate  
2. Member, Education Committee |
| Residency Program | Southern Illinois University School of Medicine  
Springfield, IL |
| Residency Program Director | D. Gordon Allan, MD |
| Please describe why you want to be a Member-at-Large, and what you hope to accomplish in the position (300 words or less) | *Please see attached statement of interest.* |

_I have read the AAOS Resident Assembly Policies and Procedures Article III Section A and the Executive Committee Member-at-Large Position Description and understand the responsibilities and commitment of the Executive Committee Member-at-Large._

**Signature of Member-at-Large nominee:**

**Date:** 1/5/2020

**Signature of Residency Program Director:**

**Date:** 1/5/2020

☐ I have disclosed at [www(aaos.org/disclosure](http://www.aaos.org/disclosure)
Statement of Interest

Member-at-Large, AAOS Resident Assembly

The Member-at-Large position is an opportunity to enhance communication among all Orthopaedic Surgery residents across the country on issues directly affecting our training and our future careers. As a member of the Resident Assembly Education Committee, I have seen the impact that the Assembly can have and its importance in allowing fellow residents to collaborate and make changes that we collectively value. In the Member-at-Large position my goals would be (1) to streamline communication via social networking and other means to keep all residents up-to-date on current issues; (2) to build on the initiatives championed by the current Executive Board – including helping foster a meaningful Medical Student section for the AAOS, furthering the efforts to adapt the Resident Education curriculum to better meet our career needs, and simplifying the Resident Delegate program to better allow for all residents to have a voice in the Assembly and in the direction of our training; and (3) helping to lead efforts that would increase resident engagement in the AAOS. As Member-at-Large I would enjoy the opportunity to help improve the national visibility of the Resident Assembly as a contact point for residents looking to make change. I also believe the opportunity to serve as an Executive Board member of the Assembly would be a great opportunity to grow as a leader and professional, and to engage in the AAOS as I hope to continue to do for many years to come.

Thank you for your consideration.

Austin Beason
Resident Assembly Executive Committee Member-at-Large

For your information, below is Article III, Section A of the AAOS Resident Assembly Policies and Procedures.

**Article III Executive Committee**

The Executive Committee shall be the primary governing body of the Resident Assembly. All other Resident Assembly committees report to the Executive Committee. The Resident Assembly Executive Committee shall report to the AAOS Emerging Professionals Committee.

The Resident Assembly Executive Committee will be comprised of three officers (Chair, Vice-Chair, Past-Chair), five Subject Matter Committee Chairs, and two At-Large Members, selected in accordance with these Rules and Procedures.

**Election of At-Large Members of the Executive Committee**

Any Resident Delegate or a Resident Member who has served one year or more on a Resident Assembly committee may submit a nomination to serve as an At-Large Member of the Resident Assembly Executive Committee.

At-Large Members for the upcoming year will be elected by the Resident Assembly at the Resident Assembly Annual Meeting by a majority vote of Resident Members and Resident Delegates in attendance.
Resident Assembly Executive Committee Member-at-Large
Responsibilities

Background

The AAOS Resident Assembly is an advisory body to the AAOS on issues of importance to orthopaedic residents. In addition, the AAOS Resident Assembly is designed as a forum to allow orthopaedic residents to embrace their roles as patient advocates and lifelong learners.

Responsibilities

- Produce reports to the Emerging Professionals Committee
- Attend the AAOS Resident Assembly Annual Meeting at the AAOS Annual meeting
- Participate and encourage fellow residents to get involved in the AAOS
- Reply to AAOS Resident Assembly requests requiring votes or input on various issues and action items
- Communicate about the AAOS Resident Assembly Annual Meeting as well as any additional conferences or meetings held throughout the year to their respective orthopaedic residency program
- Receive and distribute correspondence from the AAOS Resident Assembly and AAOS to residents in his/her orthopaedic residency programs
- Encourage orthopaedic residents to complete any AAOS surveys
- Be knowledgeable about and comply with the Resident Assembly Policies and Procedures
- Advise the executive committee of any issues or concerns of respective residency program
- Provide timely and relevant feedback, opinions and ideas to the AAOS on requested projects and programs

Term

One year to commence at the conclusion of the AAOS Annual Meeting.

Eligibility

Resident Assembly delegates and members must have served for at least one year as a member of a Resident Assembly committee.
Commitment

Members-at-Large should expect to commit approximately 50 hours each year to the Resident Assembly.

- AAOS Resident Assembly Annual Meeting at the AAOS Annual Meeting
- Executive Committee Meeting at the AAOS Annual Meeting
- Open Forum at the AAOS Annual Meeting
- National Orthopaedic Leadership Conference (3 days)
- Fall Meeting (2 days)
- Approximately 6 conference calls per year
- Approximately 2 webinars per year
- Preparation and review time prior to conference calls and the Annual Meeting
- Completion of surveys or focus groups
- Correspondence to fellow residents on AAOS and Resident Assembly issues - Produce reports to Candidate, Resident and Fellow Committee
Resident Assembly Executive Committee  
Member-at-Large Nomination Form

As noted in the AAOS Resident Assembly Policies and Procedures, the Executive Committee Member-at-Large applicants nominate themselves, and are selected by the Resident Assembly.

Below, enter your information.

<table>
<thead>
<tr>
<th>Your Name</th>
<th>Jacquelyn Dunahoe</th>
<th>PGY Year</th>
<th>4</th>
</tr>
</thead>
</table>
| Prior Resident Assembly position | Education Committee 2016-2017, 2019-present  
UW AAOS Resident Delegate 2018 - present |          |   |
| Residency Program         | University of Washington          |          |   |
| Residency Program Director| Christopher Kweon                  |          |   |
| Please describe why you want to be a Member-at-Large, and what you hope to accomplish in the position (300 words or less) | The University of Washington (UW) residency program has faced significant changes over the past several years which resulted in overcoming several challenges. Similar to other growing programs, UW has encountered curriculum changes, increased responsibilities, and financial pressures from the hospital system on residency programs. Within my program I have been one of the leaders working with our administration to address these challenges. The skills I developed working as a member of our program committees and administrators will make me a valuable member of the executive committee working with the AAOS committees and focus groups.

I have been a member of the Resident Assembly (RA) Education Committee as an intern and again this year, last year I was nominated as the UW Resident Delegate. As a member of the RA Education Committee, we developed practice management modules with the intent of providing residents basic information on practice management as they plan their careers after residency. After AAOS last year, I shared what the RA has been working on during all-resident meetings and will host a didactic session sharing information on the PAC and advocacy using the AAOS Advocacy toolkit with my residents this spring. My most recent initiative has been working with UW program residents to become more involved with AAOS and the resident assembly with a goal of increasing involvement in the AAOS resident survey, PAC, and RA. As a Member-at-Large of the executive committee I hope to continue increasing the involvement of UW residents in AAOS. I also hope to assist bringing issues residents face at our program and others to the light of the executive committee with a result of addressing and resolving these issues with the help of the AAOS RA.

I have read the AAOS Resident Assembly Policies and Procedures Article III Section A and the Executive Committee Member-at-Large Position Description and understand the responsibilities and commitment of the Executive Committee Member-at-Large.

Signature of Member-at-Large nominee:

________________________________________
1/9/2020

Signature of Residency Program Director:

________________________________________
1/13/2020

I have disclosed at www.aaos.org/disclosure
Resident Assembly Executive Committee
Member-at-Large

For your information, below is Article III, Section A of the AAOS Resident Assembly Policies and Procedures.

Article III Executive Committee

The Executive Committee shall be the primary governing body of the Resident Assembly. All other Resident Assembly committees report to the Executive Committee. The Resident Assembly Executive Committee shall report to the AAOS Emerging Professionals Committee.

The Resident Assembly Executive Committee will be comprised of three officers (Chair, Vice-Chair, Past-Chair), five Subject Matter Committee Chairs, and two At-Large Members, selected in accordance with these Rules and Procedures.

Election of At-Large Members of the Executive Committee
Any Resident Delegate or a Resident Member who has served one year or more on a Resident Assembly committee may submit a nomination to serve as an At-Large Member of the Resident Assembly Executive Committee.

At-Large Members for the upcoming year will be elected by the Resident Assembly at the Resident Assembly Annual Meeting by a majority vote of Resident Members and Resident Delegates in attendance.
Resident Assembly Executive Committee
Member-at-Large Responsibilities

Background

The AAOS Resident Assembly is an advisory body to the AAOS on issues of importance to orthopaedic residents. In addition, the AAOS Resident Assembly is designed as a forum to allow orthopaedic residents to embrace their roles as patient advocates and life-long learners.

Responsibilities

- Produce reports to the Emerging Professionals Committee
- Attend the AAOS Resident Assembly Annual Meeting at the AAOS Annual meeting
- Participate and encourage fellow residents to get involved in the AAOS
- Reply to AAOS Resident Assembly requests requiring votes or input on various issues and action items
- Communicate about the AAOS Resident Assembly Annual Meeting as well as any additional conferences or meetings held throughout the year to their respective orthopaedic residency program
- Receive and distribute correspondence from the AAOS Resident Assembly and AAOS to residents in his/her orthopaedic residency programs
- Encourage orthopaedic residents to complete any AAOS surveys
- Be knowledgeable about and comply with the Resident Assembly Policies and Procedures
- Advise the executive committee of any issues or concerns of respective residency program
- Provide timely and relevant feedback, opinions and ideas to the AAOS on requested projects and programs

Term

One year to commence at the conclusion of the AAOS Annual Meeting.

Eligibility

Resident Assembly delegates and members must have served for at least one year as a member of a Resident Assembly committee.

Commitment

Members-at-Large should expect to commit approximately 50 hours each year to the Resident Assembly.
- AAOS Resident Assembly Annual Meeting at the AAOS Annual Meeting
- Executive Committee Meeting at the AAOS Annual Meeting
- Open Forum at the AAOS Annual Meeting
- National Orthopaedic Leadership Conference (3 days)
- Fall Meeting (2 days)
- Approximately 6 conference calls per year
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- Preparation and review time prior to conference calls and the Annual Meeting
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- Correspondence to fellow residents on AAOS and Resident Assembly issues
- Produce reports to Candidate, Resident and Fellow Committee
Resident Assembly Executive Committee  
Member-at-Large Nomination Form

As noted in the AAOS Resident Assembly Policies and Procedures, the Executive Committee Member-at-Large applicants nominate themselves, and are selected by the Resident Assembly.

Below, enter your information.

<table>
<thead>
<tr>
<th>Your Name</th>
<th>Felicity Fisk</th>
<th>PGY Year</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prior Resident Assembly position</td>
<td>Delegate and Member of Education Committee</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Residency Program</td>
<td>Henry Ford Health System</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Residency Program Director</td>
<td>S. Trent Guthrie, MD</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Please describe why you want to be a Member-at-Large, and what you hope to accomplish in the position (300 words or less)</td>
<td>I want to be a Member-at-Large because the Resident Assembly is in a unique position to bring about tangible change for residents within the academy. Despite its relatively short history, the Resident Assembly has already facilitated concrete changes for resident benefit. The face of orthopaedics continues to evolve just like the needs of residents. The MAL position would allow me to help the Executive Committee shape the role for residents within the Academy in a way that will be of maximum resident value. As a MAL, I will work to make the daunting resources of the Academy more accessible to its resident members. I am excited about the universal curriculum that is being developed by AAOS and would use my position as a MAL to highlight areas where residents feel they are under-supported or where their residency experience may be lacking. I will strive to provide a voice for all residents while serving as a MAL to collaborate with the higher-ranking members in the Academy and ensure that the initiatives that may impact our education are created with resident input.</td>
<td></td>
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</tbody>
</table>
I have read the AAOS Resident Assembly Policies and Procedures Article III Section A and the Executive Committee Member-at-Large Position Description and understand the responsibilities and commitment of the Executive Committee Member-at-Large.

Signature of Member-at-Large nominee:

Date: 1/9/20

Signature of Residency Program Director:

Date: 1/9/2020

☑️ I have disclosed at www.aaos.org/disclosure
# Resident Assembly Executive Committee
## Member-at-Large Nomination Form

As noted in the AAOS Resident Assembly Policies and Procedures, the Executive Committee Member-at-Large applicants nominate themselves, and are selected by the Resident Assembly. Below, enter your information.

<table>
<thead>
<tr>
<th>Your Name</th>
<th>Zachary McBeth</th>
</tr>
</thead>
<tbody>
<tr>
<td>PGY Year</td>
<td>4</td>
</tr>
<tr>
<td>Prior Resident Assembly position</td>
<td>Na</td>
</tr>
<tr>
<td>Residency Program</td>
<td>Madigan Army Medical Center</td>
</tr>
<tr>
<td>Residency Program Director</td>
<td>Dr. Daniel Kang, MD</td>
</tr>
</tbody>
</table>

Please describe why you want to be a Member-at-Large, and what you hope to accomplish in the position (300 words or less)

As a military resident, my interest in an executive committee position stems from the unique challenges of my training and the perspective it provides. The journey of a military orthopaedist includes deployments, various duty stations and assignments, and the privilege of caring for active duty soldiers, veterans, and dependents. Many of these experiences are rewarding personally and professionally, but others can present significant challenges. Military residents face career issues such as skill atrophy during deployments, limitations in pursuing fellowship training, and balancing the duties of a military officer and orthopaedic surgeon. As a committee member at large, I aim to serve as a liaison between the committee and the military resident community. A vast majority of military orthopaedist will practice as civilians, so current career issues facing civilian residents are pertinent, and I would strive to raise awareness among military trainees. In addition, it would be my goal to better understand the unique career challenges faced by my civilian colleagues. I feel I can provide a different perspective, and desire to collaborate in resolving issues as they relate to all trainees. Finally, it would be an honor to serve in the AAOS community, and I hope to use this opportunity to better our profession and pave the way for those to come, civilian and military alike.
I have read the AAOS Resident Assembly Policies and Procedures Article III Section A and the Executive Committee Member-at-Large Position Description and understand the responsibilities and commitment of the Executive Committee Member-at-Large.

Signature of Member-at-Large nominee: [Signature]

Date: January 20, 2020

Signature of Residency Program Director: [Signature]

Date: [Date]

☑️ I have disclosed at www.aaos.org/disclosure
<table>
<thead>
<tr>
<th>Member Name</th>
<th>Term</th>
<th>Service Length</th>
<th>City</th>
<th>State</th>
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</thead>
<tbody>
<tr>
<td><strong>Chair</strong></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Mitchell Fourman, MD</td>
<td>3/15/19 - 5/1/20</td>
<td>1</td>
<td>Pittsburgh</td>
<td>PA</td>
</tr>
<tr>
<td>Chair</td>
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<tr>
<td>Robert David Graham, MD</td>
<td>3/15/19 - 5/1/20</td>
<td>1</td>
<td>Pittsburgh</td>
<td>PA</td>
</tr>
<tr>
<td><strong>Vice Chair</strong></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td><strong>Member-At-Large</strong></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Tyler Charles McDonald, MD</td>
<td>3/20/19 - 5/1/20</td>
<td>1</td>
<td>Jackson</td>
<td>MS</td>
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<tr>
<td>MAL</td>
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<tr>
<td>Cory Daniel Smith, MD</td>
<td>3/19/19 - 5/1/20</td>
<td>1</td>
<td>Greenville</td>
<td>SC</td>
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<tr>
<td>MAL</td>
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<tr>
<td><strong>Member</strong></td>
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<tr>
<td>Benjamin Maurice Braun, MD</td>
<td>3/15/19 - 5/1/20</td>
<td>1</td>
<td>Worcester</td>
<td>MA</td>
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<tr>
<td>Technology/Innovation</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Molly Day, MD, ATC</td>
<td>3/15/19 - 5/1/20</td>
<td>1</td>
<td>Iowa City</td>
<td>IA</td>
</tr>
<tr>
<td>Health Policy</td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>Christine Marie Dipompeo, MD</td>
<td>3/19/19 - 5/1/20</td>
<td>1</td>
<td>Springfield</td>
<td>IL</td>
</tr>
<tr>
<td>Career Dev Chair</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Andrew Jensen, MD</td>
<td>3/15/19 - 5/1/20</td>
<td>1</td>
<td>Rochester</td>
<td>MN</td>
</tr>
<tr>
<td>past chair</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ayoosh Pareek, MD</td>
<td>3/15/19 - 5/1/20</td>
<td>1</td>
<td>Rochester</td>
<td>MN</td>
</tr>
<tr>
<td>Research</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Stephanie S Pearce, MD</td>
<td>3/15/19 - 5/1/20</td>
<td>1</td>
<td>Denver</td>
<td>CO</td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Marcella Rae Woiczik, MD, FAAOS</td>
<td>3/17/17 - 5/1/20</td>
<td>3</td>
<td>Salt Lake City</td>
<td>UT</td>
</tr>
<tr>
<td><strong>Staff Liaison</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kristen Erickson, CAE</td>
<td>11/1/14 - 3/1/23</td>
<td>9</td>
<td>Rosemont</td>
<td>IL</td>
</tr>
</tbody>
</table>
MISSION STATEMENT
Serving our profession to provide the highest quality musculoskeletal care.

VISION STATEMENT
The trusted leaders in advancing musculoskeletal health.

CORE VALUES

GOAL 1: Deliver a personalized and seamless member experience.

STRATEGIC OBJECTIVES
- Use data to define individual member needs and preferences
- Invest in internal processes and capabilities to transform AAOS’s platform and portfolio to deliver personalized and seamless user experiences
- Develop strategic partnerships to further enhance AAOS’s offerings

METRICS
1. Increase in volume of member specific data collected and analyzed on member needs and preferences
2. Increase in user satisfaction and utilization of content delivery platform
3. Increase in the proportion of content and education personalized to user needs and preferences
4. Increase in member retention and recruitment

GOAL 2: Equip members to thrive in value-based environments and advance the quality of orthopaedic care.

STRATEGIC OBJECTIVES
- Develop a definition of quality and effectiveness that incorporates cost
- Educate members on the opportunities of moving to value-based environments
- Expand data capture through AAOS registries and reduce the burden of data entry
- Prioritize the development and roll out of practical solutions and tools
- Integrate AAOS’s advocacy and quality efforts to advance the quality of MSK health care delivery and professional reimbursement

METRICS
1. Increase in adoption of AAOS’s quality solutions and tools by members
2. Increase in the proportion of AAOS products that deliver education and data on cost/value
3. Increase in member and institutional participation in AAOS’s family of registries
4. Increase in member utilization of evidence-based and high value treatments
5. Decrease in member utilization of non evidence-based and low value treatments
6. Increase in % of professional reimbursement tied to value based care delivery

GOAL 3: Evolve the culture and governance of AAOS’s board and volunteer structure to become more strategic, innovative, and diverse.

STRATEGIC OBJECTIVES
- Measure AAOS’s culture and define a refreshed set of core values and associated behaviors
- Develop and execute a rollout plan to embed new core values and associated behaviors in AAOS’s culture
- Continue evolving AAOS’s governance to reflect best practices
- Train new leaders of AAOS’s board and volunteer structure on strategic focus and governance best practices
- Discuss, evaluate, and establish a goal to increase diversity among the leadership of AAOS’s board and volunteer structure
- Establish an innovation process in AAOS with the goal of identifying future investments in projects

METRICS
1. Increase in awareness and impact of new core values and associated behaviors
2. Advancement in AAOS’s governance reflecting best practices
3. Identify a baseline and establish a goal for increasing diversity among AAOS’s board and volunteer structure
4. Increase in amount of revenue generated from new investments in innovation

KEY ENABLERS
- Advocacy: Advocate to advance access to and quality of MSK health care, and support providers to thrive in an evolving health care environment
- Communication: Communicate renewed member value stemming from new strategic plan
- Partnerships: Partner to develop the right content, programs, and platforms to increase member value and drive greater impact
- Technology: Continue modernizing AAOS’s technology platforms to offer seamless experiences
AAOS Policy For a Fellow or Member Who Fails To Disclose Conflicts Of Interests Accurately and Completely

AAOS Orthopaedic Disclosure Program Background

1. Each Fellow or Member participating in an AAOS CME program, serving as an author of enduring materials, as a member of the AAOS Councils, Cabinets, Committees, Project Teams or other official AAOS groups, editors-in-chief and editorial boards or AAOS guideline development workgroups has the obligation to disclose all potentially conflicting interests accurately and completely through the AAOS Orthopaedic Disclosure Program.

2. Each Fellow or Member is responsible for providing accurate and complete information to the AAOS Orthopaedic Disclosure Program regarding the nature of his or her relationships with commercial entities relating to orthopaedics, which must be updated at least semiannually (usually April and October). It is recommended that participants note any changes to the AAOS Orthopaedic Disclosure Program as soon as possible after the changes occur.

Directions for Handling Failure of Fellow or Member to Disclose Accurately and Completely

1. Upon receipt of notice that an AAOS Fellow or Member has failed to disclose a conflict of interest accurately or completely, AAOS staff shall discuss the disclosure deficiency with the Fellow or Member. If unsuccessful at obtaining accurate and complete disclosure, AAOS staff shall then talk with the appropriate Committee/Project/Group Chair. From these discussions, AAOS staff will follow AAOS Orthopaedic Disclosure Policy in an effort to obtain the Fellow or Member's accurate and complete disclosure, time permitting.

2. If unsuccessful in obtaining an accurate and complete disclosure, staff will prepare a summary with recommendations on handling the matter, including the following information:

3.  
   a. The identity of the Fellow or Member and his/her role within the project/program;
   b. Background on the project/program/guideline involved;
   c. Documentation on attempts to have the Fellow or Member complete the Disclosure Report accurately and completely; and
   d. Any materials related to known conflict(s) of interest (e.g., prior disclosures; industry website disclosure report, if available/applicable).
3. The summary will be presented to the Department Manager and/or Executive Team member for review and resolution of the disclosure deficiency issue in conjunction with the Committee/Project/Group Chair.

4. If the issue cannot be satisfactorily resolved, AAOS staff shall submit an updated summary, with supporting materials, to the Office of General Counsel. The Office of General Counsel shall advise the President regarding the appropriate action for AAOS to take. The President of AAOS shall make the final decision regarding matters of accurate and complete disclosure.

- As appropriate, the Office of General Counsel will request the assistance of the Committee on Outside Interests in developing recommendations for the President regarding appropriate actions for failure to accurately and completely report.

5. All incidents of failure to accurately and completely disclose must be submitted to the Office of General Counsel.

6. On an annual basis, the Committee on Outside Interests will review a report developed by the Office of General Counsel documenting any and all incidents of failure to accurately and completely disclose within Academy programs.

The AAOS disclosure and conflict of interest processes are being developed and reviewed with the goal of transparent and appropriate decision-making. This protocol was developed to provide guidance to the various Committee/Program/Group Chairs, Editors, and appropriate staff on challenging conflict of interest issues. This protocol may be modified as other AAOS policies and procedures are developed.

Adopted: September 23, 2011
Revised: December 2011
AAOS Policy for a Fellow or Member Who Fails to Disclose Conflicts of Interest when Required

AAOS Orthopaedic Disclosure Program Background

- Each Fellow or Member participating in an AAOS CME program, serving as an author of enduring materials, as a member of the AAOS Councils, Cabinets, Committees, Project Teams or other official AAOS groups, editors-in-chief and editorial boards or AAOS guideline development workgroups has the obligation to disclose all potentially conflicting interests through the AAOS Orthopaedic Disclosure Program.
- Each Fellow or Member is responsible for providing accurate and complete information to the AAOS Orthopaedic Disclosure Program regarding the nature of his or her relationships with commercial entities relating to orthopaedics, which must be updated at least semiannually (usually April and October). It is recommended that participants note any changes to the AAOS Orthopaedic Disclosure Program as soon as possible after the changes occur.
- The AAOS Orthopaedic Disclosure Policy expressly provides that "a failure of a required participant to participate in the AAOS Orthopaedic Disclosure Program will result in the participant being asked not to participate in the AAOS CME program, the AAOS governance group, as editor-in-chief or on an editorial board and AAOS guideline development."
- All Fellows and Members are encouraged to participate in the AAOS Orthopaedic Disclosure Program.

Directions for Handling Failure of Fellow or Member to Disclose When Required

- Upon receipt of notice that an AAOS Fellow or Member has failed to disclose a conflict of interest when required, AAOS staff shall discuss the disclosure matter with the Fellow or Member who failed to disclose. If unsuccessful in obtaining the disclosure, AAOS staff shall then talk with the appropriate Committee/Project/Group Chair. From these discussions, AAOS staff will follow AAOS Orthopaedic Disclosure Policy in an effort to obtain the Fellow or Member's disclosure, time permitting.
- If unsuccessful in obtaining a disclosure, staff will prepare a summary with recommendations on handling the matter, including the following information:
  - The identity of the Fellow or Member and his/her role within the project/program;
  - Background on the project/program/guideline involved;
  - Documentation on attempts to have the Fellow or Member complete the Disclosure Report; and
  - Any materials related to known conflict(s) of interest (e.g., prior disclosures; industry website disclosure report, if available/applicable).
- The summary will be presented to the Department Manager and/or Executive Team member for review and resolution of the disclosure issue in conjunction with the Committee/Project/Group Chair.
- If the issue cannot be satisfactorily resolved and there is no disclosure, AAOS staff shall submit an updated summary, with supporting materials, to the Office of General Counsel. The Office of
General Counsel shall determine the appropriate action for AAOS to take. The Office of General Counsel will inform the Presidential Line of any actions under consideration for failure to report. In addition, as appropriate, the Office of General Counsel will request the assistance of the Committee on Outside Interests regarding appropriate actions for failure to report.

- All incidents of failure to disclose must be submitted to the Office of General Counsel.
- On an annual basis, the Committee on Outside Interests will review a report developed by the Office of General Counsel documenting any and all incidents of nondisclosure within Academy programs.

The AAOS disclosure and conflict of interest processes are being developed and reviewed with the goal of transparent and appropriate decision-making. This protocol was developed to provide guidance to the various Committee/Program/Group Chairs, Editors, and appropriate staff on challenging conflict of interest issues. This protocol may be modified as other AAOS policies and procedures are developed.

Adopted: September 23, 2011
AAOS Mandatory Disclosure Policy

Governance Groups (Except Board of Directors), Continuing Medical Education Contributors, Senior Management Team Members, and Others

Philosophy

In order to promote transparency and confidence in the educational programs and in the decisions of the American Academy of Orthopaedic Surgeons and the American Association of Orthopaedic Surgeons (hereinafter collectively referred to as "AAOS"), the AAOS Board of Directors has adopted this mandatory disclosure policy.

The actions and expressions of Fellows or Members providing education of the highest quality or in shaping AAOS policy must be as free of outside influence as possible and any relevant potentially conflicting interests or commercial relationships must be disclosed. Because the AAOS depends upon voluntary service by Fellows and Members to conduct its educational programs and achieve its organizational goals, this disclosure policy has been designed to be realistic and workable.

The AAOS does not view the existence of these interests or relationships as necessarily implying bias or decreasing the value of your participation in the AAOS.

Who Must Disclose

Each participant in the AAOS CME program or author of enduring materials, member of the AAOS Board of Directors, Board of Councilors, Board of Specialty Societies, Councils, Cabinets, Committees, Project Teams or other official AAOS groups (collectively "AAOS governance groups"), editors-in-chief and editorial boards and AAOS clinical practice guidelines, appropriate use criteria and performance measures development workgroups, has the obligation to disclose all potentially conflicting interests. Each participant in the AAOS CME program or author of enduring materials, AAOS governance groups, editors-in-chief and editorial boards and AAOS clinical practice guidelines, appropriate use criteria and performance measures development workgroups must disclose relevant activities or relationships through the AAOS Orthopaedic Disclosure Program.

Responsibility of the Individual Who Discloses

Using a uniform form approved by the AAOS Board of Directors, participants are responsible for providing information to the AAOS Orthopaedic Disclosure Program regarding the nature of their relationships with commercial entities relating to orthopaedics. Participants are responsible for the accuracy and completeness of their information. In addition, participants have an obligation to review and update their personal information in the AAOS Orthopaedic Disclosure Program at least semiannually (usually April and October). It is strongly recommended that participants note any changes to the AAOS Orthopaedic Disclosure Program as soon as possible after they occur. All orthopaedic surgeons are encouraged to participate in the AAOS Orthopaedic Disclosure Program.

Consequences for Failing to Disclose

A failure of a required participant to participate in the AAOS Orthopaedic Disclosure Program will result in the participant being asked not to participate in the AAOS CME program, the AAOS governance group, as editor-in-chief or on an editorial board and AAOS clinical practice guidelines, appropriate use criteria and performance measures development workgroups. The most current version of the AAOS Policy for a
Fellow or Member Who Fails to Disclose Conflicts of Interest When Required shall govern all actions taken under this provision.

Public Disclosure of AAOS Orthopaedic Disclosure Program Information

The information in the AAOS Orthopaedic Disclosure Program shall be available to the public and to other AAOS Fellows and Members. In addition, a list of all participants in the AAOS CME program, AAOS governance group or AAOS clinical practice guidelines, appropriate use criteria and performance measures development workgroups, along with their disclosures, will be included in all meeting materials.

Disclosure of Potential Conflicts of Interests at AAOS Governance Meetings

As indicated above, a list of all participants in the AAOS governance group, along with their current disclosures, will be included in all meeting materials.

Participants in AAOS governance groups (except for the Board of Councilors and Board of Specialty Societies) have an obligation to indicate any potential conflicts they may have during discussions affecting their personal interests during the meeting of the AAOS governance group. At each meeting of the AAOS governance group, members of the group will be reminded that full disclosure must be made of any potential conflict of interest when a matter involving that interest is discussed.

The chair of the governance group shall also have the prerogative of requesting a participant to provide further information or an explanation if the chair identifies a potential conflict of interest regarding that participant. The chair shall be guided by the most current version of the Protocol for the President to Use in Handling Potential Conflict of Interest Issues Before the AAOS Board of Directors. Based on the information provided in the AAOS Orthopaedic Disclosure Program and/or upon a further review, the chair of the AAOS governance group may determine that the participant shall:

- Disclose the potential conflict and continue to participate fully in the AAOS governance group's discussions and vote; ["Disclosure Option"]
- Disclose the potential conflict, address any questions other members of the group have on the subject, then leave the room and not participate in further discussion and vote ["Recusal from Vote option"] or
- Depart from the room until the matter has been fully discussed and acted upon. ["Recusal from Discussion and Vote option"].

If one of these actions is taken, it should be reflected in the minutes of the AAOS governance group's meeting.

Adopted: February 2007; Revised: December 2009; February 2012
Travel Policy

Volunteers and AAOS Staff

The Academy/Association (AAOS) policy for AAOS-related travel for volunteers and staff is outlined below. This policy is effective January 1, 2018. Travel guidelines for members of the Board of Directors and for Council and Cabinet Chairs are outlined in a separate policy.

Please note that no member is eligible for reimbursement for travel to the Annual Meeting. This is the case even if a member is scheduled to attend a Council or Committee meeting during the course of the Annual Meeting.

Introduction

The AAOS recognizes that volunteers give generously of their time and spend time away from their practices to participate in AAOS events. When this dedication on the part of members is added to the fact that more than 3,000 trips are made by AAOS volunteers in the course of a year, it becomes paramount that the AAOS travel policy be fair, consistent, and easily understandable. In addition, it must provide for prompt and accurate reimbursement of expenses incurred. Finally, it must fulfill certain obligations required by the Internal Revenue Service and also adhere to principles of prudent management.

Domestic Air travel

Volunteer travelers are strongly encouraged, and AAOS staff are required (any exceptions must be approved by the Finance Director), to use CorpTrav, AAOS' official travel agent, to make their travel arrangements for AAOS business. In so doing the airfare and agent fees are charged directly to AAOS but travelers retain any reward miles that may apply and have access to 24 hour travel assistance. In addition, AAOS receives complimentary air travel certificates in proportion to the number of tickets and/or the amount of airfare AAOS books. These certificates are then used for special, unbudgeted events or costly tickets. (No reward miles are earned when traveling on a certificate.)

Round-trip travel should be booked on one airline whenever possible (the same airline going and returning). If a ticket for a volunteer exceeds $600, CorpTrav will contact AAOS staff to authorize issuing the ticket.

Discounted non-refundable and non-transferable main cabin coach class tickets for scheduled meetings should be purchased at least 21 days prior to travel, as this will generally yield the lowest fare available. Non-refundable does not mean that the ticket can’t be changed. If a non-refundable ticket is cancelled, CorpTrav will receive credit for the cost of the ticket, to be applied to future travel for the same individual on the same airline.

The fee to book the ticket is $12 if the ticket is purchased online and $32 if acquired over the phone – i.e., agent-assisted booking. There is an additional $15 charge for agent-assisted booking if done after hours, between 7:00 pm-7:00 am.

AAOS will reimburse for the additional fees charged by the airlines for checked bags up to a two bag maximum. Overweight baggage fees will not be reimbursed. Flight changes will be reimbursed up to $200 per round trip. Travel or flight insurance will not be reimbursed.

Use of a private airplane is strongly discouraged due to liability issues as the Academy’s insurance will neither cover the volunteer traveling aboard a private airplane on AAOS business nor the AAOS.


**Upgrades**

Upgrade purchases are not reimbursable, including upgrades to Economy Plus, however, additional fees for aisle or window seats are allowed.

**International flights**

Volunteers traveling on behalf of the AAOS can travel Business Class on all international trips. Staff members whose flight time is at least seven hours may also travel Business Class. (For purposes of this policy, flights to/from Canada, Hawaii and Alaska are considered domestic.)

**RELATED TOPICS**

**Hotel/lodging**

Lodging accommodations should be made at mid-price hotels, such as Starwood, Hilton, Marriott, or Hyatt properties. AAOS will reimburse lodging expenses up to $250 per day including all taxes, with the exception of hotel stays in New York, Washington D.C., and San Francisco, which are reimbursable at a maximum of $400 per day including all taxes.

Travelers to Rosemont should stay at the Hampton Inn, where AAOS has preferential room rates. Stays at other Chicago area hotels will be reimbursed at the Hampton Inn preferred rate, currently $134 plus tax, and transportation costs are not reimbursable.

**Meals and Beverages**

AAOS will reimburse individuals for meals and beverages in conjunction with official AAOS business at a rate of $125 per day, excluding those meals provided by AAOS. The entire $125 may be applied toward dinner. Some programs or events may limit the daily rate to less than $125 and notification will be made prior to the event. AAOS does not reimburse for meals taken in lieu of AAOS-provided or sponsored meals, or for meals after travel has concluded (i.e., after return flight).

**Other travel expenses**

AAOS will reimburse individuals for usual and customary miscellaneous expenses related to travel in conjunction with AAOS business. Allowable expenses in this category include:

- Wi-Fi usage on flights
- Internet usage based on hotel’s access charge and reasonable cost (See Exhibit A)
- Hotel in-room movie or use of hotel fitness center
- Customary gratuities for baggage handling, etc.
- Ground transportation to and from airports
- Valet laundry service up to $50 when travel covers seven consecutive days.

Master accounts at hotels will only cover the room and tax. Any other incidental expenses are to be paid by the traveler and claimed on the expense voucher, if appropriate.

Personal expenses are not reimbursable. Examples include, but are not limited to, child care, pet care, entertainment, and toiletry purchases.

**Automobile travel**

AAOS will reimburse individuals traveling in conjunction with AAOS business via personal automobile at the published US Government Internal Revenue Service rate per mile ($0.545 per mile effective
If a personal vehicle is used in lieu of airline travel, mileage reimbursement may not exceed the cost of the commercial 21-day discounted Coach airfare. Automobile rental for travel in conjunction with AAOS business is discouraged. Hotel shuttle vans and taxis are the preferred mode of ground travel. If rental cars are necessary, AAOS has negotiated special rates with Hertz and Avis. Please use the following information when booking a rental:

<table>
<thead>
<tr>
<th>Company</th>
<th>Meeting Code</th>
<th>Phone</th>
<th>Internet</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hertz</td>
<td>CV# 02KS0023</td>
<td>1-800-654-2240</td>
<td><a href="http://www.hertz.com">www.hertz.com</a></td>
</tr>
<tr>
<td>Avis</td>
<td>AWD# J095822</td>
<td>1-800-331-1600</td>
<td><a href="http://www.avis.com">www.avis.com</a></td>
</tr>
</tbody>
</table>

**SPECIAL RULES REGARDING TRAVEL**

**Add-on personal travel**

Add-on or personal travel is defined as travel either before or after AAOS meetings that is scheduled by and at the sole discretion of the traveler. All expenses incurred with add-on travel are the responsibility of the traveler.

**Expense Reporting/Receipts**

Original receipts are required for each travel expense item that is $25 or more, including taxi fares or car services, however, the traveler is encouraged to obtain receipts for all expenses. As required under IRS guidelines receipts for meals should be detailed showing individual food or beverage items. Hotel receipts should include detailed room folios.

Expense reports (with attached receipts documenting all costs of $25 or more) are due to the Accounts Payable Department within 30 days of the completed travel. This ensures timely reimbursement and accurate record keeping. Reimbursement checks are typically issued within two weeks of receipt of vouchers.

**Exhibit A**

**Internet Access Procedures when Traveling**

The traveling employee, member, or faculty will be reimbursed for Internet use for AAOS business or AAOS-related research. Some computer systems do not support all methods of Internet connection.

**Internet access**

In order to be reimbursed for Internet connectivity, the traveler must utilize one of the following:

- The hotel's local Internet service provider to access the Internet at the hotel's stated per diem rate. It is the responsibility of the hotel guest to obtain this information and specifics regarding log-on and/or passwords upon check-in, or
- His/her own Internet service provider if that provider has a local access number or toll-free access for the area where the employee, member or faculty is traveling. It is the responsibility of the employee, member or faculty to ensure that this option is a viable alternative prior to traveling.

Most national Internet service providers (ISPs) have areas on their websites where local access or toll-free access numbers can be found. Please note that when using the service provider's toll-free access
number in lieu of a local access number, a surcharge or per-minute charge is typically added to the subscriber's monthly bill. This will be the subscriber's responsibility to pay and is not reimbursable.

Many national ISPs also have a customer service number to call for the local access number for a given travel destination. Small providers may not have a national access network. The traveler should contact his/her individual service provider for more details.
The American Academy of Orthopaedic Surgeons and the American Association of Orthopaedic Surgeons (collectively “AAOS”) expects all of its volunteers and its employees to act in accordance with the highest standards of personal and professional integrity in all aspects of their activities; to comply with all applicable laws, rules, and regulations; to deter wrongdoing; and to abide by all duly adopted AAOS policies and procedures. This AAOS Code of Ethics applies to members of the Board of Directors, Council or Cabinet Chairs, Advisory Board Chairs, Committee Chairs, the Executive Management Team, and the Senior Management Team.

This AAOS Code of Ethics is intended to supplement the AAOS Standards of Professionalism and Code of Medical Ethics and Professionalism for Orthopaedic Surgeons (for orthopaedic volunteers) and the most recent edition of the AAOS Personnel Policy Manual (for AAOS employees).

Those to whom this AAOS Code of Ethics applies agree to:

- Engage in and promote honest and ethical conduct, including the ethical handling of actual and potential conflicts of interest between personal and professional relationships;
- Recognize conflicts of interest and disclose to the Board of Directors, Council/Cabinet, or Executive Management Team (as appropriate for your position) and to the Committee on Outside Interests any material transactions or relationships that reasonably could be expected to give rise to such conflicts;
- Respect the confidentiality of information acquired in the course of your duties;
- Provide colleagues with information that is accurate, complete, objective, relevant, timely and understandable;
- Comply with applicable laws, rules and regulations of federal, state and local governments;
- Act in good faith, with due care, competence, and diligence, without misrepresenting material facts or allowing independent judgment to be subordinated;
- Assure the responsible use of and control of all assets, resources, and information in the possession of the AAOS and related organizations; and
- Promptly refer any questions about or any alleged violations of this Code of Ethics to the President of the AAOS.

The AAOS Board of Directors shall have the discretionary authority to approve any deviation or waiver from this AAOS Code of Ethics and shall determine what action, if any, is appropriate for any real or alleged violation.

Adopted: June 2004
Revised: December 2014
AAOS ANTITRUST REMINDER

Discussions at meetings of the American Academy of Orthopaedic Surgeons and the American Association of Orthopaedic Surgeons (collectively “AAOS”) often cover a broad range of topics pertinent to the interests or concerns of orthopaedic surgeons. The purpose of the Reminder is to alert AAOS members and staff to the kinds of activities most likely to raise antitrust concerns and to the precautions that must be taken to avoid potential antitrust problems.

As a general rule, except as noted below, discussions at AAOS meetings can address virtually any topic without raising antitrust concerns if the discussions are kept scrupulously free of even the suggestion of private regulation of the profession. However, a number of topics that might be (and have been) discussed at AAOS meetings may raise significant complex antitrust concerns. These include:

- Membership admissions, rejections, restrictions, and terminations;
- Professional compliance actions – reprimands, censures, suspensions and expulsions;
- Adoption of and revisions to Standards of Professionalism;
- Method of provision and sale of AAOS products and services to non-members;
- Restrictions in the selection and requirements for exhibitors at the AAOS Annual Meeting or in CME activities;
- Collecting and distributing certain orthopaedic practice information, particularly involving practice charges and costs;
- Obtaining and distributing orthopaedic industry price and cost information;
- Professional certification programs;
- Group buying and selling; and
- Inclusions or exclusion of other medical societies in organizational activities or offerings.

When these and related topics are discussed, the convener or members of the AAOS group should seek counsel from the AAOS Office of General Counsel.
AAOS staff has been trained to identify potential antitrust matters. The AAOS relies on the judgment of its staff regarding these matters. AAOS urges its Board, committees and other groups not to participate in discussions that may give the appearance of or constitute an agreement that would violate the antitrust laws.

Notwithstanding this reliance, it is the responsibility of each AAOS Board or committee member to avoid raising improper subjects for discussion. This reminder has been prepared to ensure that AAOS members and other participants in AAOS meetings are aware of this obligation.

The “Do Not’s” and “Do’s” presented below highlight only the most basic antitrust principles that may come before medical associations, like AAOS. AAOS members and staff participating in AAOS meetings should consult with the AAOS Office of General Counsel in all cases involving specific questions, interpretations or advice regarding antitrust matters.

**Do Nots**

1. Do not, in fact or appearance, discuss or exchange information regarding:
   
   a. Individual company prices, price changes, price differentials, mark-ups, discounts, allowances, credit terms, etc. or any other data that may bear on price, such as costs, production, capacity, inventories, sales, etc.
   
   b. Raising, lowering or “stabilizing” orthopaedic prices or fees;
   
   c. What constitutes a fair profit or margin level;
   
   d. The availability of products or services;
   
   e. The allocation of markets, territories or patients.

2. Do not suggest or imply that AAOS members should or should not deal with certain other persons or firms.

3. Do not suggest or imply that AAOS compliance standards, guidelines, measures or other resources should favor some members or practices and/or disadvantage others.

4. Do not foster unfair practices regarding advertising, standardization, certification or accreditation.

5. Do not discuss or exchange information regarding the above matters during social gatherings, incidental to AAOS-sponsored meetings.

6. Do not make oral or written statements on important issues on behalf of AAOS without appropriate authority to do so.
Do

1. Do adhere to prepared agenda for all AAOS meetings, ideally distributed in advance. Agendas should be sufficiently detailed to disclose the nature of the discussions to be held. It is generally permissible for agendas to include discussions of such varied topics as professional economic trends, advances and problems in relevant technology or research, various aspects of the science and art of management, and relationships with local, state or federal governments.

2. Do require that a member of the AAOS professional staff participate in every AAOS meeting, either in person or by conference call. If any meeting is expected to deal with sensitive competitive issues, counsel from the AAOS Office of General Counsel should ordinarily be present. Committee staff should consult with AAOS legal counsel to determine whether the presence of counsel is advisable. If AAOS legal counsel is not at the meeting, members and staff should not hesitate to consult the AAOS Office of General Counsel as necessary.

3. Do ensure that a record of all meetings, consisting of formal minutes or a memo to the file, should be made by AAOS committee staff.

4. Do object whenever meeting summaries do not accurately reflect the matters that occurred.

5. Do consult with AAOS counsel on all antitrust questions relating to discussions at AAOS meetings.

6. Do object to and do not participate in any discussions or meeting activities that you believe violate the antitrust laws; dissociate yourself from any such discussions or activities and leave any meeting in which they continue.

Special Guidelines for Collecting and Distributing Information

The collection and distribution of information regarding business practices is a traditional function of associations and is well-recognized under the law as appropriate, legal and consistent with the antitrust laws. However, if conducted improperly, such information gathering and distributing activities might be viewed as facilitating an express or implied agreement among association members to adhere to the same business practices. For this reason, special general guidelines have developed over time regarding association’s reporting on information collected from and disseminated to members. Any exceptions to these general guidelines should be made only after discussion with the AAOS Office of General Counsel. These general guidelines include:
1. Member participation in the statistical reporting program is voluntary. The statistical reporting program should be conducted without coercion or penalty. Non-members should be allowed to participate in the statistical reporting program if eligible; however, if there is a fee involved, they may be charged a reasonably higher fee than members.

2. Information should be collected via a written instrument that clearly sets forth what is being requested.

3. The data that is collected should be about past transactions or activities; particularly if the survey deals with prices and price terms (including charges, costs, wages, benefits, discounts, etc.), it should be historic (more than three months old).

4. The data should be collected by either the AAOS or an independent third party not connected with any one member.

5. Data on individual orthopaedic surgeons should be kept confidential.

6. There should be a sufficient number of participants to prevent specific responses or data from being attributable to any one respondent. As a general rule, there should be at least five respondents reporting data upon which any statistic or item is based, and no individual’s data should represent more than 25% on a weighted average of that statistic or item.

7. Composite/aggregate data should be available to all participants – both members and non-members. The data may be categorized, e.g., geographically, and ranges and averages may be used. No member should be given access to the raw data. Disclosure of individual data could serve to promote uniformity and reduce competition.

8. As a general rule, there should be no discussion or agreement as to how members should adjust, plan or carry out their practices based on the results of the survey. Each member should analyze the data and make business decisions independently.

**CONCLUSION**

This reminder has been written to avoid any violation of the law by AAOS members and staff and any activity that might give the appearance of illegality. However, no set of guidelines can address every possible type of inappropriate or unlawful activity. AAOS members and staff should use careful judgment to identify situation where AAOS activities, or discussions at AAOS-sponsored meetings, may violate federal or state law or may be perceived as doing so. In those cases, it is the responsibility of the member and staff to avoid these situations and consult with the AAOS Office of General Counsel when necessary.
ANTI-DISCRIMINATION AND ANTI-HARASSMENT
POLICY AND PROCEDURES

AAOS also prohibits harassment or discrimination in any form by any person(s) attending or otherwise participating in AAOS-sponsored events, meetings or social gatherings. AAOS is committed to providing an environment that is free from all forms of discrimination and harassment, including but not limited to those based on race, color, creed, religion, national origin, ancestry, sex, sexual orientation, gender identity or expression, disability, age, marital status, status regarding public assistance, veteran or military service status, or any other legally protected status.

This AAOS Policy sets the expectations for the behavior of all members, meeting attendees, guests, exhibitors, vendors and suppliers (referred to as Attendees) and applies to all AAOS Activities, whether in person or virtual, including but not limited to during

- the creation or delivery of work products on behalf of AAOS;
- any AAOS business interaction;
- meetings hosted by AAOS, including the Annual Meeting;
- conferences, seminars or courses;
- any meeting of any AAOS entity including the Boards, committees and subcommittees, and
- all ancillary or unofficial social events held in conjunction with any AAOS meeting.

1. Unacceptable Behavior. Discrimination or harassment by any person against another person, regardless of his/her role with AAOS, constitutes unacceptable behavior and will not be tolerated. Unacceptable behaviors may include:

   a) Unwelcome and uninvited attention or contact;

   b) Verbal or written comments, or visual images, that are sexually suggestive; denigrate or show hostility or aversion toward an individual, or group of individuals; create an intimidating, hostile, or offensive environment; or unreasonably interfere with an individual’s ability to participate in AAOS Activity;

   c) Intimidating, harassing, abusive, discriminatory, derogatory or demeaning speech or actions in any context during an AAOS Activity;

   d) Harmful or prejudicial verbal or written comments or visual images related to gender, sexual orientation, race, religion, disability, age, appearance, or other personal characteristics;

   e) Deliberate intimidation, following or stalking;

   f) Harassing photography or recording;

   g) Physical assault (including unwelcome touching or groping);

   h) Real or implied threat of physical harm; or
i) Real or implied threat of personal, professional, or financial damage or harm.

2. **AAOS Employees.** AAOS Employees who are subjected to unacceptable behavior should report it immediately to their supervisor (or another person in their direct line of reporting) and Human Resources. AAOS will address any unacceptable behavior by AAOS Employees in accordance with its Employment Policies.

3. **Attendees.** AAOS reserves the right to take any action it deems appropriate against an Attendee who engages in unacceptable behavior.

   a) When AAOS receives a complaint of unacceptable behavior by an Attendee, the matter will be reviewed in a timely manner, taking into consideration the relevant facts and circumstances. The complainant and any parties involved may be asked to provide written statements.

   b) Any Attendee found to have engaged in unacceptable behavior may be removed from the meeting or event (without refund) and/or excluded from future meetings.

   c) Any AAOS member behaving in an unacceptable manner may be subject to additional consequences, including but not limited to suspension or expulsion from AAOS membership.