

AAOS

AMERICAN ACADEMY OF  
ORTHOPAEDIC SURGEONS

AMERICAN ASSOCIATION OF  
ORTHOPAEDIC SURGEONS

2021 Annual Report

# Because it matters



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Social Media Ambassadors met for an outdoor social gathering at the AAOS 2021 Annual Meeting in San Diego.

## 2021 Leadership

# Board of Directors



**Daniel K. Guy, MD, FAAOS**  
President  
LaGrange, GA



**Felix H. Savoie III, MD, FAAOS**  
1st Vice President  
New Orleans, LA



**Kevin J. Bozic, MD, MBA, FAAOS**  
2nd Vice President  
Austin, TX



**Alan S. Hilibrand, MD, MBA, FAAOS**  
Treasurer  
Philadelphia, PA



**Michael L. Parks, MD, FAAOS**  
Treasurer-Elect  
New York, NY



**Joseph A. Bosco III MD, FAAOS**  
Past-President  
New York, NY



**Wayne A. Johnson, MD, FAAOS, FACS**  
Chair, Board of Councilors  
Lawton, OK



**Claudette M. Lajam, MD, FAAOS**  
Chair, Elect Board of Councilors  
New York, NY



**Alfonso Mejia, MD, MPH, FAAOS**  
Secretary, Board of Councilors  
Chicago, IL



**Kevin D. Plancher, MD, MPH, FAAOS**  
Chair, Board of Specialty Societies  
New York, NY



**Alexandra E. Page, MD, FAAOS**  
Chair-Elect, Board of Specialty Societies  
San Diego, CA



**Armando F. Vidal, MD, FAAOS**  
Secretary, Board of Specialty Societies  
Vail, CO



**Lisa N. Masters**  
Lay Member  
Fayetteville, GA



**Matthew P. Abdel, MD, FAAOS**  
Member-at-Large  
Rochester, MN



**Valerae O. Lewis, MD, FAAOS**  
Member-at-Large  
Houston, TX



**Karen M. Sutton, MD, FAAOS**  
Member-at-Large  
Stamford, CT



**Alexander Vaccaro, MD, MBA, PhD, FAAOS**  
Member-at-Large  
Gladwyne, PA



**Thomas E. Arend Jr., Esq., CAE**  
Chief Executive Officer (Ex-Officio)  
Rosemont, IL

### EXECUTIVE LEADERSHIP TEAM

- Thomas E. Arend Jr., Esq., CAE**, Chief Executive Officer
- Dino Damalas, MBA**, Chief Operating Officer
- Laura Abrahams**, Chief Human Resources Officer
- Nathan Glusenkamp, MA**, Chief Quality and Registries Officer
- Anna Salt Troise, MBA**, Chief Commercial Officer



## Letter from the President and the CEO

**T**hroughout the years, The American Academy of Orthopaedic Surgeons (AAOS) has remained a steadfast resource and pillar of support for its members. As physicians, you have navigated all manner of obstacles, a volatile environment and unexpected adversities. This year was no exception. While the world continued to grapple with the COVID-19 pandemic, AAOS volunteer leadership and staff dedicated themselves to delivering on our strategic plan to serve our profession and provide the highest quality musculoskeletal care.

We are proud to report that in 2021 we brought our members safely together in person for the first time in nearly two years. This reunion took place in San Diego at the AAOS Annual Meeting, which encapsulated what attendees have come to expect: outstanding educational content featuring symposia led by thought leaders in their fields. With the health and safety of attendees foremost in mind, the AAOS was able to hold a successful meeting, and in doing so, we proved that education matters to the orthopaedic community. For all who were able to attend, it was a remarkable experience.

Our updated Member Value and Satisfaction Survey gave our members the opportunity to be heard and to voice their opinions. Thanks to a significant awareness campaign, response to this survey increased by 260% from the previous year. We are now addressing your feedback to create action plans based on your members' wants and needs. Your voice matters.

The Academy was also able to fully deploy the AAOS Leadership Institute (ALI) and begin guiding members through its different levels. Each level of the program progressively develops members' skills, knowledge and experiences to prepare them for AAOS leadership positions. With 193 participants already on their path through the program, it is clear to our members that leadership matters.

Quality took a front seat this year, with various departments working toward scientific innovation, data collection and advocacy. AAOS continued its leadership in the field of biologics by holding a Biologics Symposium and updating the Biologics Dashboard. The AAOS Registry program expanded its family of Registries by launching the Fracture and Trauma Registry. Advocacy efforts by AAOS led to progress on important issues such as reimbursement, prior authorization and surprise medical billing. By focusing on the issues that matter most to our members and patients, the AAOS continues to demonstrate that quality and advocacy matter.

The AAOS Board of Directors closed out 2021 by approving two new and important initiatives. First, the board authorized a five-year, \$1 million program devoted to diversity, equity and inclusion within the profession. Second, in collaboration with our specialty partners and Orthopaedic Research and Education Foundation, a new Specialty Society Research Fund will provide \$250,000 of annual support. Guided by our strategic plan and corresponding Core Values, AAOS volunteers and our superb AAOS volunteers and staff remain committed to keeping this organization moving forward through any challenge. The success of AAOS is largely due to their efforts, along with your own ongoing support of our mission. AAOS is here for you, our members, now and always. Why? Because our profession and the health of your patients matter.

Thank you for your trust and commitment to us and the AAOS.



Daniel K. Guy, MD, FAAOS  
AAOS President



Thomas E. Arend, Jr., Esq., CAE  
AAOS Chief Executive Officer



## About AAOS

### THE AMERICAN ACADEMY OF ORTHOPAEDIC SURGEONS

Founded in 1933, the American Academy of Orthopaedic Surgeons (AAOS) is the preeminent provider of musculoskeletal education to orthopaedic surgeons and others in the world. Its continuing medical education (CME) activities include a world-renowned annual meeting, multiple CME courses held around the country and at the OLC Education and Conference Center, and various medical and scientific publications and electronic media materials.

### THE AMERICAN ASSOCIATION OF ORTHOPAEDIC SURGEONS

Founded by the Academy Board of Directors in 1997, the Association engages in health policy and advocacy activities on behalf of musculoskeletal patients and the profession of orthopaedic surgery.

The AAOS Political Action Committee (OrthoPAC) is the only national political action committee in Washington, D.C., representing orthopaedic surgeons before Congress.

### OVERVIEW

With more than 38,000 members, the AAOS is the world's largest medical association of musculoskeletal specialists. The AAOS provides educational programs for orthopaedic surgeons and allied health professionals, champions and advances the highest quality musculoskeletal care for patients, and is the authoritative source of information on bone and joint conditions, treatments and related issues.

### AAOS MISSION

Serving our profession to provide the highest quality musculoskeletal care.

### AAOS VISION

The trusted leaders in advancing musculoskeletal health.

### AAOS CORE VALUES

Leading to Serve. Shaping the Future. Excellence Together.

Members of all career stages gathered to share their experience and expertise at the Speed Mentoring for Residents event at the AAOS 2021 Annual Meeting in San Diego.

# 2021 At-A-Glance

## QUALITY

- **163 people** attended the Biologics Symposium
- Successfully launched the **Fracture and Trauma Registry (FTR)**
- Approved **3** new CPGs\*, **2** new AUCs\* and **2** new Toolkits
- Partnered with **Cohere Health** to reduce prior authorization burdens for AJRR\* participants
- Partnered with **OREF\*** to fund biologics-focused research

## EDUCATION

- **11.1K attendees** at the 2021 Annual Meeting
- Over **200,000 square feet** of exhibit space sold at the 2021 Annual Meeting
- A record-breaking **340 registrants** for Board Prep Part 1
- **382 videos** published on OVT\*
- Over **3,200 CME\*** course registrations
- Over **16,000 webinar registrations**
- Over **180,000 CME credits** claimed from combined courses and LMS\*
- **428 total JAAOS articles** published



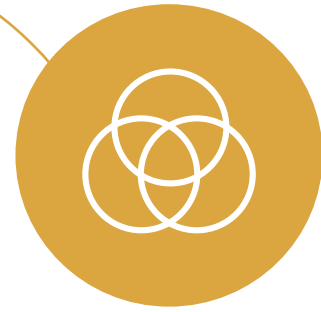
## LEADERSHIP

- **193 members** participating in the AAOS Leadership Institute
- **17% increase** in women on the AAOS Board of Directors since 2020
- **182% increase** in URMs\* on the AAOS Board of Directors since 2020
- **New editors-in-chief** named to JAAOS\* and OrthoInfo
- Over **600 members** on councils, committees and advisory boards



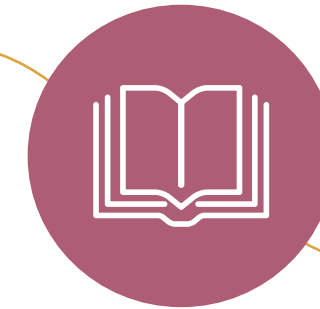
## STRATEGY

- Successfully completed **3 years** of our five-year strategic plan
- Implemented **2021 initiatives** closely aligned to the strategic plan
- Achieved over **90%** of 2021 strategic plan goals



## MEMBERSHIP

- **38,680** members in 2021
- **29% increase** in membership applications
- **260% increase** in MVAS\* responses since 2020
- **LGBTQ+ identifiers** added to member profiles
- **2% increase** in female and URM active fellow membership



## ADVOCACY

- Obtained **213 congressional signatures** on **two AAOS letters** opposing surprise medical billing
- Supported signing of **antitrust legislation**
- Directed the raising of over **1.7 million hard and soft dollars** by OrthoPAC



\*Abbreviations: **AJRR** = American Joint Replacement Registry; **AUC** = appropriate use criteria; **CME** = continuing medical education; **CPG** = clinical practice guideline; **JAAOS** = Journal of the American Academy of Orthopaedic Surgeons; **LMS** = learning management system; **MVAS** = Member Value and Satisfaction Survey; **OREF** = Orthopaedic Research and Education Foundation; **OVT** = Orthopaedic Video Theater; **URM** = underrepresented minority



# Results matter

2021 Financial Performance

## Financial Position (dollars in thousands)

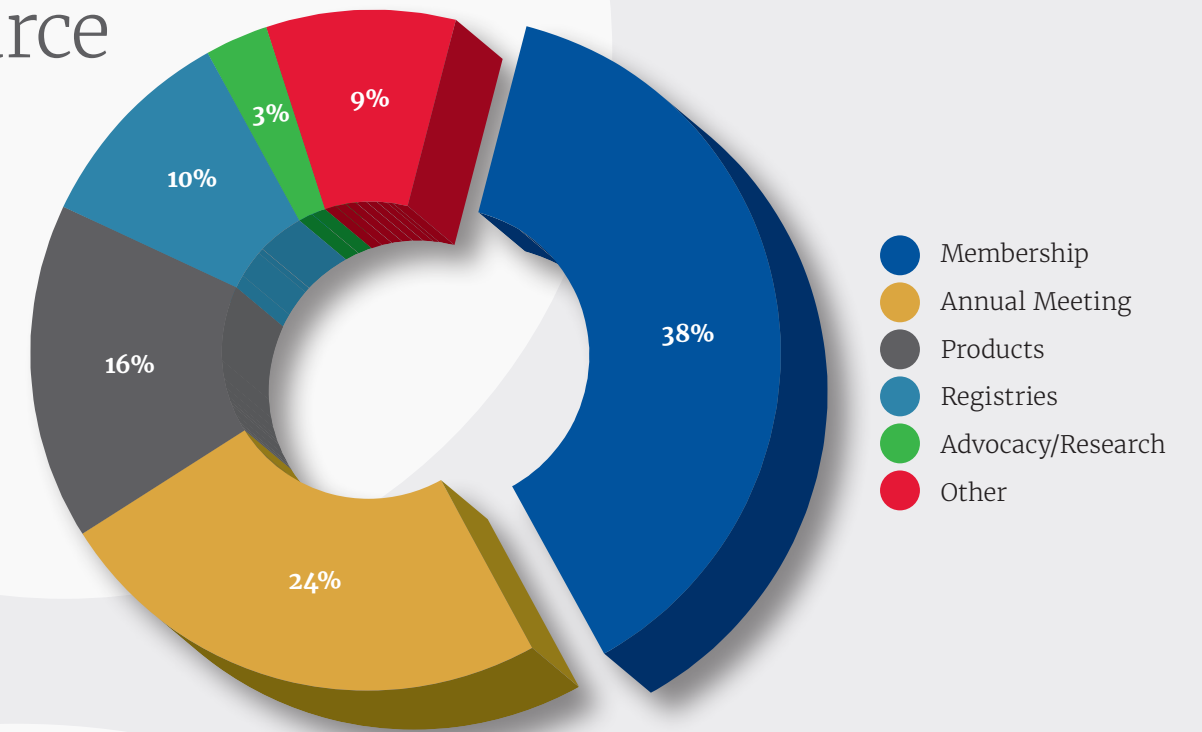
		December 2021	December 2020
<b>Assets</b>	Cash and cash equivalents	37,758	28,790
	Accounts receivable	8,053	12,542
	Investments	136,788	124,201
	Property and equipment	10,526	9,706
	Other assets	4,261	3,774
	<b>TOTAL</b>	<b>197,386</b>	<b>179,013</b>
<b>Liabilities</b>	Accounts payable and accrued expenses	9,996	9,693
	Deferred revenue	20,782	19,399
	<b>TOTAL</b>	<b>30,778</b>	<b>29,092</b>
<b>Net assets</b>	Unrestricted	164,181	147,430
	Temporarily restricted	2,427	2,491
	<b>TOTAL</b>	<b>166,608</b>	<b>149,921</b>

## Financial Position (dollars in thousands)

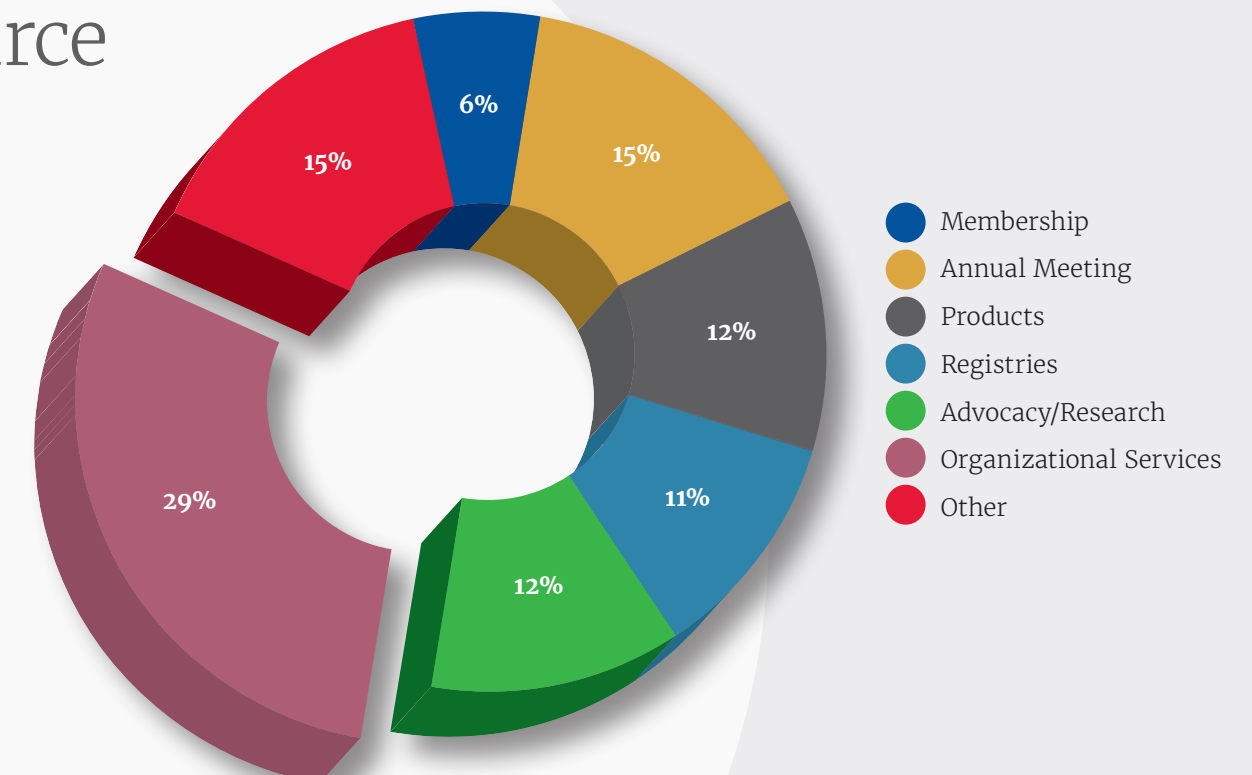
	December 2021	December 2020
<b>Revenues</b>	60,428	60,294
<b>Expenses</b>	55,462	54,674
<b>Net income from operations</b>	4,966	5,620
<b>Investments</b>	11,910	12,158
<b>Investments in OPLLC</b>	711	(581)
<b>Investments in projects (from reserves)</b>	(1,401)	(956)
<b>Change in net assets</b>	<b>16,186</b>	<b>16,241</b>

Note: 2021 results are unaudited.

# Revenue by source



# Expenses by source







# Membership matters

## Membership matters

# Supporting, listening and engaging

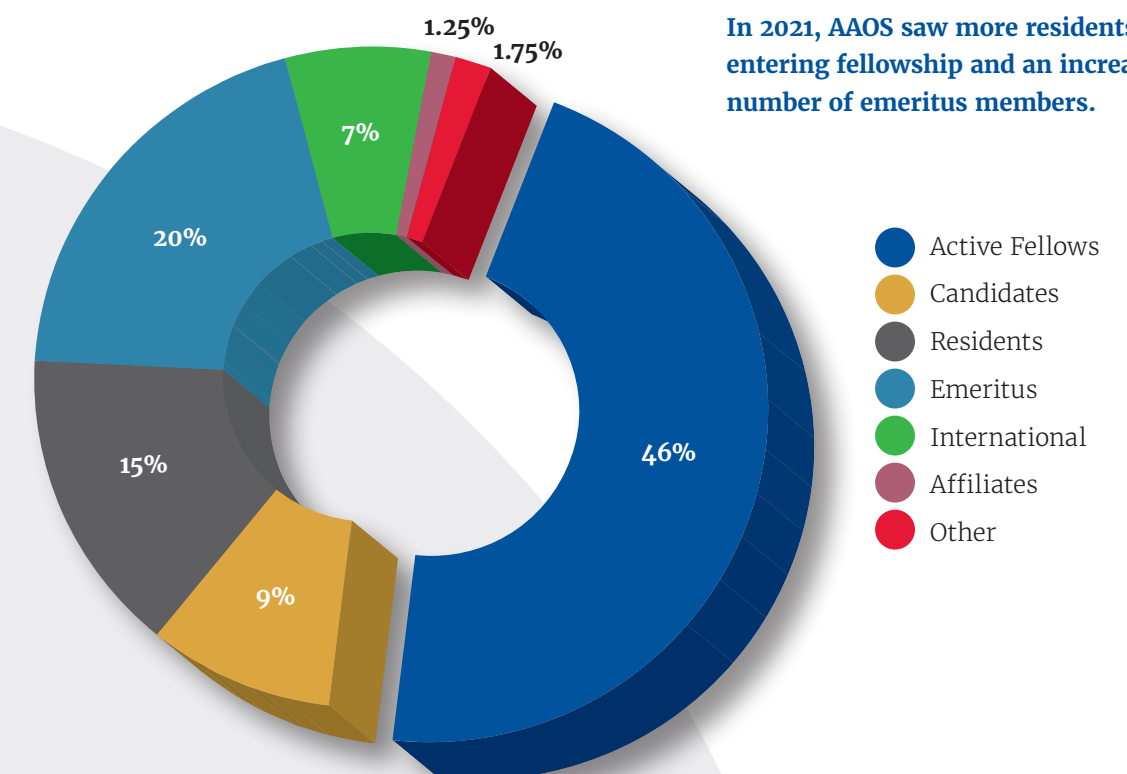
AAOS provides support to its 38,000+ members at every stage of professional development, with access to benefits, resources and exclusive content.

Despite the global challenges of COVID-19, the 2021 membership year saw many wins. Since the beginning of the pandemic in 2020, the AAOS experienced a **29% increase in membership applications, and membership retention improved by 2%, with an impressive overall retention rate of 95.08%.**

This growth can be directly correlated to the AAOS's continued dedication to deliver and improve value to all members.

Active Fellows received more than **10 times** the value of their dues in services and benefits.

## 2021 membership by type



In 2021, AAOS saw more residents entering fellowship and an increasing number of emeritus members.



## The need to understand our members

during this challenging time also led the AAOS to reimagine the Member Value and Satisfaction Survey (MVAS). Championed by AAOS volunteer leadership, the survey was simplified to five questions, and a creative communications campaign improved participation. The MVAS offers members an opportunity to be heard by sharing their opinions on the value they receive and ways to improve their experience as an AAOS member.

The changes resulted in more than 6,000 respondents, a 260% increase in responses from 2020. The survey results identified several key areas of focus for the coming year, including advocacy, education and more support for practices.

Leadership remained committed in their efforts to support diversity, champion member value and personalize communication.

To work towards the AAOS's strategic goal of providing a more diverse and inclusive environment for members, LGBTQ+ identifiers were added to the member

## AAOS continued to explore ways

to expand international membership efforts, fielding in-depth market research to understand the areas of greatest need and opportunity and setting the stage for future educational programming and events. The new **AAOS World Opinion Forum** was launched as a free webinar series that brings attendees together from across the globe to share unique perspectives on hot topics in orthopaedics.



### 2021 INTERNATIONAL EDUCATION

11

AAOS participated in 11 educational programs in 8 different countries.

41

During those programs, 41 AAOS faculty hosted sessions.

8,500+

More than 8,500+ international surgeons participated in these programs.



## Be Heard.

profile in 2021. AAOS diversity, equity and inclusion initiatives have helped to support growth in our female and URM groups over the previous year, seeing a 2% increase in both categories among Active Fellows.



May's Resident Member of the Month, Ayoosh Pareek, MD, was featured on AAOS Social Media channels.



## AAOS continues to build

upon a strong established social media presence on platforms like Facebook, LinkedIn, Instagram and Twitter, which helps members stay abreast of innovations and current news, and engage with peers.

Using these platforms, AAOS launched the Member of the Month series, celebrating and showcasing these individuals on our website and social media channels, which earned over 130,000 total views. Members also contributed their views on relevant topics like mental health and mentorship.

Members shared tips and lessons learned with their colleagues through several short videos this year.

The video "How to Stay Calm in the OR" garnered more than 10,000 views on social media overnight. The "Thank You Ortho" spot achieved more than 13,000 views since launch and sparked overwhelmingly positive conversations of gratitude and celebration among members and their mentors.

### AAOS SOCIAL MEDIA PERFORMANCE IN 2021

16,557

new followers in 2021



62,121

website visits in 2021

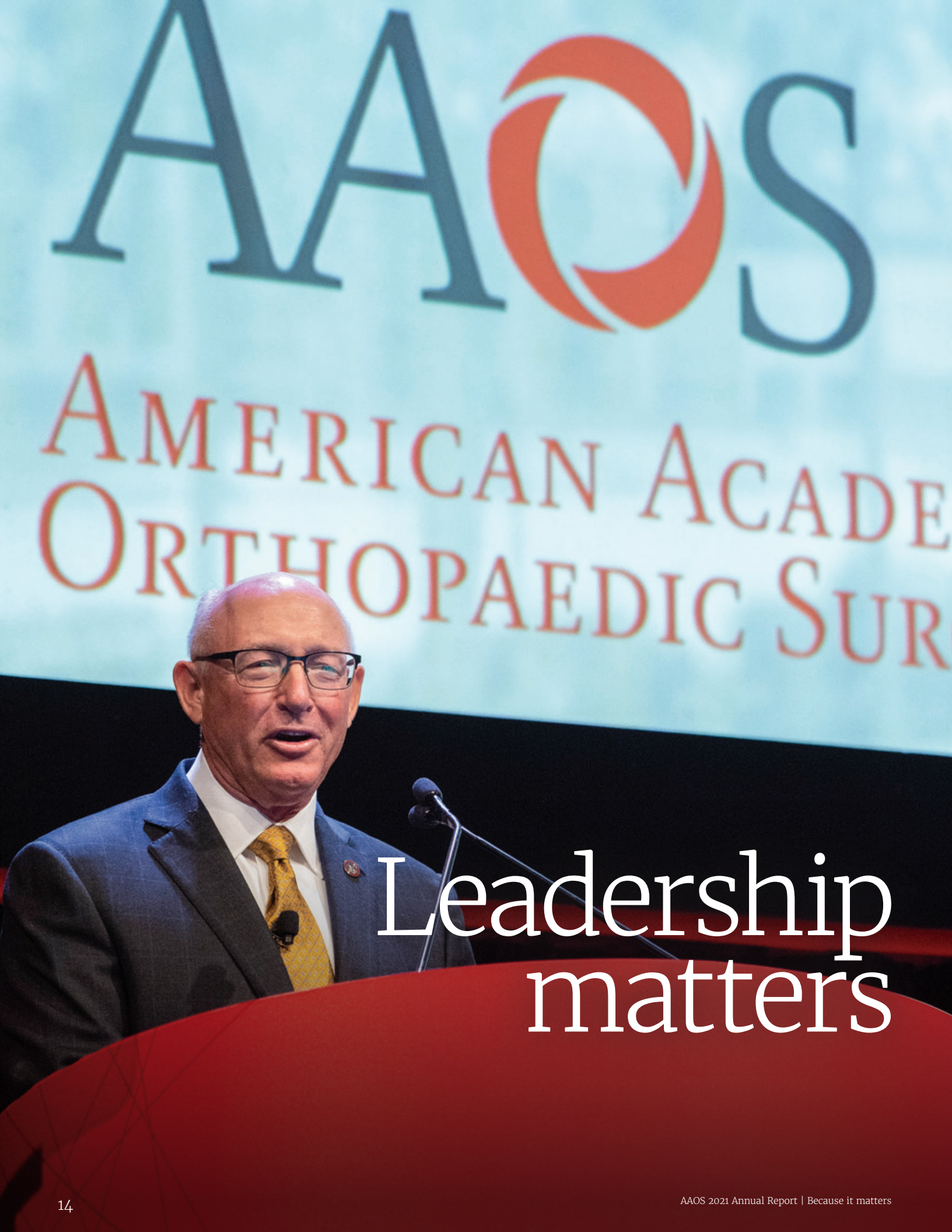


172,255

engagements in 2021







## Leadership matters

# Preparing for the future and championing diversity

In 2021, the AAOS advanced leadership with purposeful action to engage with key stakeholders through communications, diversity initiatives and advocacy events. The AAOS also celebrated the full launch of the AAOS Leadership Institute (ALI), which provided members with wider access to mentorship, additional experiences and learning module opportunities.



### AAOS Leadership Institute

In 2020 AAOS launched the AAOS Leadership Institute (ALI), a four-tiered program that is available to all AAOS members across diverse backgrounds to prepare them with the tools, skills and competencies to thrive in future AAOS leadership roles.

The four tiers of ALI offer exclusive education in AAOS program offerings, member benefits, cultural understanding, governance and problem-solving skills. The program pairs online education with in-person, experiential learning and a range of networking opportunities. One-on-one mentoring is offered within Levels 3 and 4 of the program, including identifying customized learning modules through the mentoring process. Advanced participants engage in self-assessments, coaching and a series of interactive sessions on leadership development and diversity. In 2021, over 193 members accessed and began the program. The inaugural classes for Level 3 (20 participants) and Level 4 (9 participants) will complete the program requirements in March 2022.



Successful completion of various levels of the program is a prerequisite for future council/committee service and leadership roles.

### Partnering for the future

**In 2021, the AAOS Board of Directors approved funding for new research and study grants.** A pledge of \$100,000 from AAOS will back the American Orthopaedic Society for Sports Medicine (AOSSM) and its upcoming historic 50th Anniversary Research Initiative to support a first-of-its-kind collaborative sports medicine research project.



## Leveraging member expertise to lead discussions within the musculoskeletal community

In continuing to lead important conversations within the musculoskeletal community, The Bone Beat Orthopaedic Podcast Channel launched two new shows, one focused on professional development and another on AAOS courses. The *AAOS Career Podcast* is hosted by leadership within the Resident Assembly Executive Committee and features conversations between early-career surgeons and experienced attendings offering practical tools for guided growth in the specialty. The *JAAOS Journal Club* features discussions on topics from AAOS courses, led by the course directors. The shows join AAOS's expanding podcast footprint: The *AAOS Advocacy Podcast* covers the latest health-policy issues affecting musculoskeletal health, and *JAAOS Unplugged®* summarizes and reviews articles from the latest issues of the *Journal of the American Academy of Orthopaedic Surgeons (JAAOS)*. Episodes of the four shows are available through popular app streaming services, including Apple, Google, Spotify and Stitcher, or through the AAOS website at [aaos.org/thebonebeat](http://aaos.org/thebonebeat).

# THE BONE BEAT

Orthopaedic Podcast Channel

from AAOS

The AAOS 2021 Annual Meeting featured an on-site podcast studio in Academy Hall, where *AAOS Career Podcast* host Austin Beason, MD, (left) and *AAOS Advocacy Podcast* host Douglas Lundy, MD, MBA, FAAOS, (right) recorded a special episode on resident involvement in advocacy.



## Diversity in leadership

AAOS made progress toward its goal of evolving the culture and governance structure to become more strategic, innovative and diverse. The AAOS Diversity Advisory Board (DAB) is charged with supporting the strategic plan objective for increased diversity.



### RECRUITMENT

The AAOS leadership met with J. Robert Gladden Orthopaedic Society, Ruth Jackson Orthopaedic Society (RJOS) and the American Association of Latino Orthopaedic Surgeons to increase communication among the organizations and focus outreach on underrepresented groups in orthopaedics. AAOS continues to support these organizations through member communications and articles in AAOS Now and AAOS Headline News Now.



### SELECTION

To increase transparency and accountability, AAOS published its 2021 Governance Diversity Report to chart its progress on increasing diversity among the AAOS's volunteer structure. In 2021, AAOS posted an increase in the percentage of female (17%) and URM (182%) holding positions on the AAOS Board of Directors as well as increases in the number of female members holding leadership positions on AAOS councils and committees. The overall percentage of female and URM serving as members on AAOS councils and committees increased.



### RETENTION

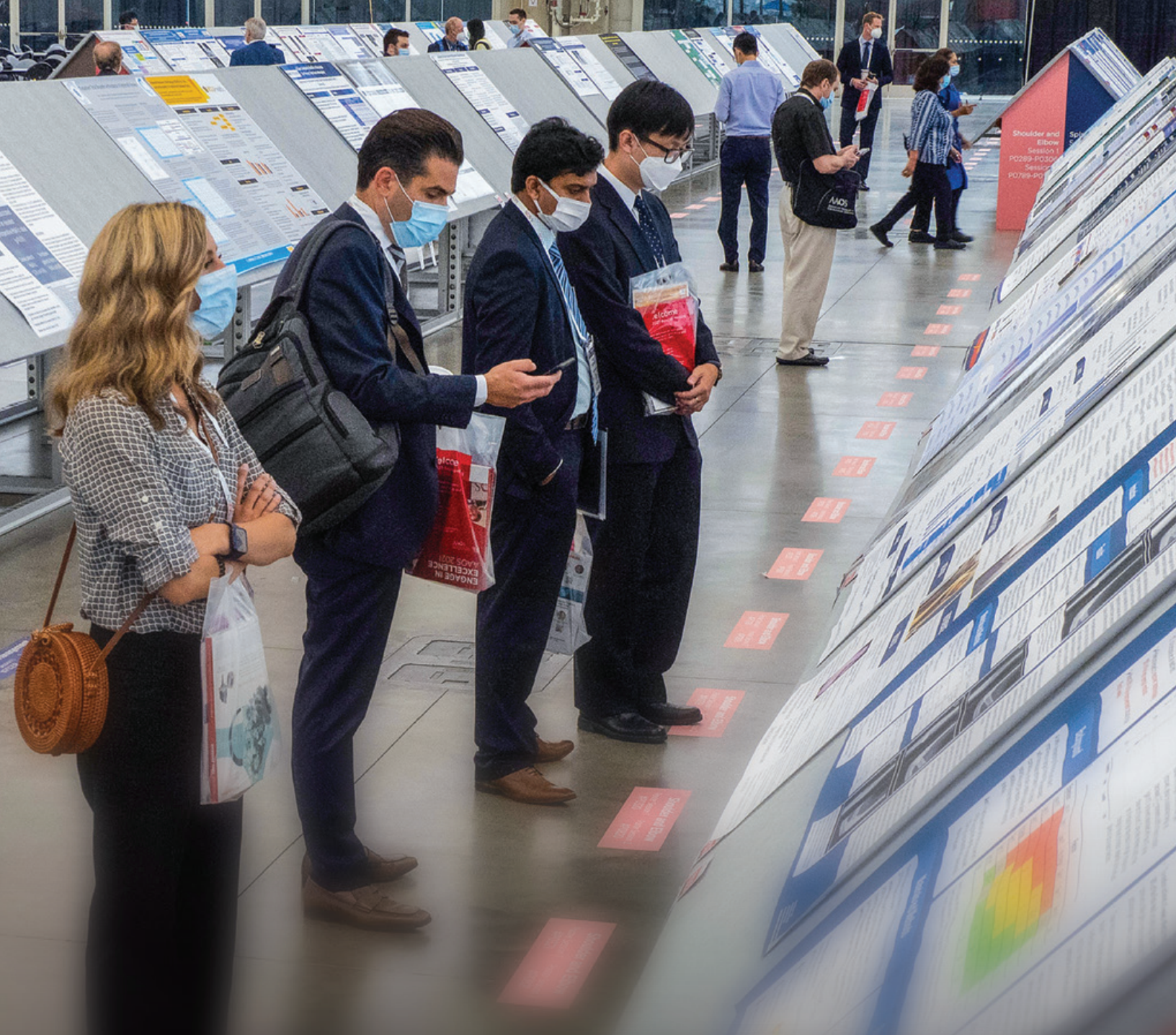
Diversity content was integrated into the curriculum for ALI. The AAOS DAB reviewed its current onboarding process and recommended improvements to the current diversity and implicit bias content. AAOS continued its dialogue on retention by encouraging the DAB to give feedback on the annual Committee Appointment Program Evaluation Process.



### CULTURE

AAOS held two Diversity Town Hall webinars in 2021 to provide a forum for AAOS members to learn about AAOS initiatives in this area. Diversity communications were integrated throughout AAOS programs, including diversity and implicit bias content in the governance onboarding process and diversity-related articles in AAOS Now. A workplace culture survey is planned for 2022 to continue efforts to foster a more diverse AAOS culture.





# Education matters

## Education matters

# Expanding opportunities to learn

A core pillar of the AAOS strategic plan is to deliver a personalized and seamless member experience. Education is central to that mission. 2021 provided a wealth of opportunities for members to access high quality instruction in both in-person and online formats.

Throughout the year, AAOS’s educational offerings were enhanced, expanded, and accessed by thousands of members, supporting clinical excellence at every stage of their careers. The AAOS remained committed to providing the latest peer-reviewed knowledge to maximize educational support, whether online or in person, for its members.

### Residents: the future of the profession

2021 marked the development of the new Resident Orthopaedic Core Knowledge (ROCK) learning environment. ROCK is the first-ever unified and comprehensive resident curriculum available to residency programs across the country. Beta testing began in late 2021.

The acronym “ROCK” was the result of an online challenge to name the new curriculum, and hundreds of submissions from residents were reviewed. Ultimately, “Resident Orthopaedic Core Knowledge,” submitted by



first year resident Sarah Fogleman, MD, was selected.

The ROCK learning environment launches at the AAOS 2022 Annual Meeting, at which time all Accreditation Council for Graduate Medical Education programs will be automatically enrolled and will be able to utilize the new platform.

Upon launch, select subspecialty sections will be available to all U.S. program directors and residents currently enrolled in a residency program. Additional sections will be released throughout 2022.



Sarah Fogleman, MD

### Resident Rumble

The AAOS Resident Rumble is an exciting, no-holds-barred virtual trivia competition that pits residency programs from across the country against one another to show off their knowledge. The games are a combination of orthopaedic-based trivia, pop culture trivia and fun competitions. Congratulations to 2021 first-place winners UT Houston and second-place winners Henry Ford Hospital.







## Engage in excellence at the 2021 Annual Meeting

The AAOS Annual Meeting has long served as a prime educational opportunity for members as well as the larger musculoskeletal health community. Challenges from the COVID-19 pandemic ultimately caused the cancelation of the 2020 meeting and the rescheduling of the 2021 meeting from March to September. After a long hiatus, and with the health and safety of attendees and staff as a top priority, the Academy was able to successfully facilitate the reunion of the orthopaedic community in San Diego. AAOS delivered a robust educational program including symposia, Ask an Expert sessions, Instructional Course Lectures (ICLs), Orthopaedic Video Theater (OVT) content, Tech Talks, scientific paper sessions, poster/poster tours and more.

**200,000+** square feet of exhibit space

**11.1K** attendees

**20** symposia

**174** ICLs

**807** papers and **1,013** posters

These educational offerings allowed attendees to explore the innovations and techniques that establish AAOS as the trusted leader in musculoskeletal care. In addition to reuniting in person, attendees had the option to register for Annual Meeting OnDemand, which gave access to an online library of 500 hours of cutting-edge content.

## Online and in-person learning

Due to the continued restrictions on in-person learning caused by COVID-19, the AAOS increased opportunities for virtual professional development and education, expanding its online course offerings across the board and providing the CME members have come to expect and value.

### COURSES

**3,200+** CME course registrations

**16,000+** webinar registrations

**12,000+** CME credits claimed

ACCESSED LEARN.AAOS.ORG

**20,900** Unique users

**711,938** sessions

**168,000+** CME credits claimed

### RECORD-BREAKING ATTENDANCE

**Almost 350** registrants enrolled in **Board Prep and Review 2021**

**Over 200** registrants enrolled in **Workers' Compensation 2021 course**

**Over 100** registrants enrolled in the **July Resident Total Joint Arthroplasty (TJA) course, making it the largest AAOS course at the OLC in more than 10 years.**



## ORTHOPAEDIC IN-TRAINING EXAMINATION

The 2021 Orthopaedic In-Training Examination (OITE)® was administered last November, with more than 5,000 surgical residents taking the exam. Score reports for the OITE were compiled and distributed to 218 domestic and international residency programs in December.

As an enhanced study aid, the OITE ResStudy modules now offer a new Build-A-Quiz feature, released to

residents who took the November 2020 OITE. Residents can use the Build-A-Quiz feature to choose a variety of questions on a desired exam topic and then complete the related Orthopedic Knowledge Update® 13 or OITE exam, giving them a customized learning experience.

The rollout of the new American Board of Orthopaedic Surgery (ABOS) Resident Dashboard to orthopaedic surgery residents participating in the ABOS Knowledge, Skills, and Behavior (KSB) Program exemplifies the ongoing partnership between AAOS and ABOS. The OITE constitutes the Knowledge portion of the ABOS KSB Program. On their dashboards, residents can see their OITE scores each year, as well as how they potentially correlate with performance on the ABOS Part I Examination.

## ORTHOPAEDIC VIDEO THEATER



The OVT includes high-quality, peer-reviewed lectures, content from the Journal of the American Academy of Orthopedic Surgeons and footage of

orthopaedic surgical procedures from start to finish. The videos feature evidence-based medicine and highlight best practices in an accessible online format. In 2021, nearly 400 new videos were published to the platform and more than 9,200 CME hours were awarded. More content and engaging new features resulted in nearly 204,000 views in 2021.

## OLC EDUCATION AND CONFERENCE CENTER AND MOBILE LAB

The OLC bioskills lab is the most expansive educational environment of its kind, providing a world-class clinical setting for medical professionals from across the globe.

AAOS assumed stewardship of the OLC in 2021, fostering ongoing collaboration with its specialty partners – the Arthroscopy Association of North America and AOSSM.

With the OLC now integrated fully into AAOS, the partners will remain involved in an advisory committee and continuing to offer courses. This AAOS commitment will ensure the continuity of the OLC as the premier bioskills facility in orthopaedics.

The OLC Mobile Lab launched this year, a 1,100 square-foot bioskills training lab that dramatically expands the OLC's geographic reach. It offers new opportunities for clinicians to develop and advance their surgical skills.



## OrthoInfo



*OrthoInfo*, the Academy's patient-education website, offers members reliable, consumer-friendly musculoskeletal health resources they can use to inform and

empower their patients. The website houses extensive content covering conditions, treatments, recovery and more – all developed by the specialists from *OrthoInfo's* 14-member editorial board. A new Patient Safety & Quality board position was created in 2021 to develop comprehensive resources around patient safety, insurance, quality and value.

**In 2021, close to 27 million people visited OrthoInfo.org, viewing nearly 40 million pages.**

An enhanced focus on social media – including adding a social media editor to the board – helped to boost member and patient awareness of OrthoInfo content, generating 450,000+ impressions and 10,000+ engagements, substantial increases over 2020.

## JAAOS portfolio

The Journal of the American Academy of Orthopaedic Surgeons (JAAOS®) and Journal of the AAOS Global Research & Reviews® (JAAOS Global), are essential tools for continued excellence in peer-reviewed research, patient care and surgical outcomes. JAAOS published 287 articles in 2021, while JAAOS Global published 141 articles and saw a 23% increase in submissions from the previous year.

Beyond the pages of the journals, JAAOS continued to extend its multimedia offerings through webinars, podcasts, blogs, infographics and social media.

- **The JAAOS Unplugged® podcast**, hosted by Stephanie Pearce, MD, grew viewership by 9% in 2021 and has surpassed 100,000 downloads.
- **The JAAOS Journal Club podcast**, launched in 2021, features lively discussion on articles of interest from JAAOS.
- **The JAAOS resident blog** *Sounds from the Training Room* has garnered close to 12,000 views in 2021, marking a 17% increase over the number of views in 2020.
- **The @OfficialJAAOS Twitter account**, launched in July, has already climbed to more than 17,000 followers.
- **JAAOS established its own dedicated channel** on OVT, publishing 180 article-related videos in 2021.







# Quality matters

## Quality matters

# Equipping members to thrive

In 2021, AAOS advanced its purpose to support member clinicians through a broad array of programs and initiatives.

### Better understanding biologics

AAOS gained significant momentum in delivering evidence-based content specifically related to orthobiologics, the growth in biologics knowledge and its application to orthopaedic treatment and care.

A full-day virtual symposium on orthobiologics drew **more than 160 live-streaming attendees** who heard from 15 content experts. The symposium, Orthobiologics in Non-Surgical Treatment of Knee Osteoarthritis: Risks and Benefits for Your Patients and Practice, focused on biologics as treatment and addressed the scientific, economic and regulatory factors involved in this burgeoning field.

AAOS's technology overviews (TOs) use systematic review methodology to summarize the findings of current studies on a given topic for a specified patient population. AAOS approved the first TO, which will be led by the Committee on Devices, Biologics, and Technology on the topic of Bone Marrow Aspirate Concentrate (BMAC) for knee osteoarthritis.

### Investing in research

AAOS supported primary research on the use of injectable biologics by partnering with the Orthopaedic Research and Education Foundation (OREF). Through this partnership, AAOS committed to donating \$50,000 toward an annual grant, the first of which was awarded in 2021 to Scott Rodeo, MD, FAAOS, to support research on the topic of "PRP Treatment of the ACL-Injured Knee to Decrease the Risk of PTOA." This grant aims to help narrow the gap between clinical research funding and prioritize clinical research needs in musculoskeletal care, including orthobiologics. AAOS regularly updates and improves its Biologics Dashboard, launching a more intuitive user interface in 2021.



In its statement regarding regulation of biological products, AAOS outlines positions on the current needs:

- Continue and enhance use of real-world evidence
- Determine which biologic therapies are proven and which are clinical trials
- Clarify the regulatory status of BMAC and Cellular Bone Matrices (CBM)
- Support continued enforcement of Human Cells, Tissues, and Cellular and Tissue-based Products (HCT/Ps) Regulations

AAOS committed to donating **\$50,000** toward an annual grant, in partnership with OREF, to help fund clinical research needs, including orthobiologics.





**The AAOS Registry Analytics Institute® (RAI)**, makes data analyses available to clinical investigators and authors that submit proposals. A total of 39 applications were submitted in 2021, of which, 12 were accepted for presentation and publication.

**Aetna's Institutes of Quality (IOQ)**, for orthopaedic care require Joint Commission Advanced Total Hip and Total Knee Replacement (THKR) Certification and AJRR data submission for hospitals and ASCs. Once a site has attained advanced certification begun data submission to AJRR, the site will then be reviewed by Aetna for the IOQ designation.

More than 1,400 participating sites and 14,000 registered surgeons participate in the AAOS Registry Program across all 50 states and the District of Columbia.

## Registry expansion

**Evidence is essential to inform real-world practices. The collection, analysis and measurement of unique and actionable clinical data, tracked by the AAOS Registry Program, serve to inform members of quality improvements to deliver better surgical outcomes.**

In 2021, the AAOS Family of Registries continued to address growing needs and interest. With support from the Orthopaedic Trauma Association, AAOS announced the Fracture and Trauma Registry (FTR) as the fifth in a series of anatomical, evidence-based registries.

FTR will collect data on five of the more common fractures in the United States. It marks the first AAOS registry built from a synergistic approach – a place where collaborative modules will be available across the AAOS RegistryInsights® platform, offering expanded, crossover benefits to AAOS Registry Program participants. The FTR's modules will include fractures of the hip, distal femur, proximal humerus, distal radius, and ankle.

The addition of FTR demonstrates the utility, reach and growing influence of the AAOS Registry Program. Across the FTR and its sister registries – American Joint Replacement Registry (AJRR), Shoulder and Elbow Registry (SER), the Musculoskeletal Tumor Registry (MsTR), and the American Spine Registry (ASR: a collaborative registry with the American Association of Neurological Surgeons) – participants share their data for numerous community benefits.

### The registries allow practitioners to

- compare their practices to national performance benchmarks;
- get on-demand access to quality reports and dashboards;
- track and monitor longitudinal patient outcomes;
- facilitate site- and practice-specific, payer-incentivized performance improvement programs;
- qualify for national distinction program;
- report to quality improvement programs;
- gain early access to surveillance alerts for poorly performing implants; and improve the value of care delivered to patients.

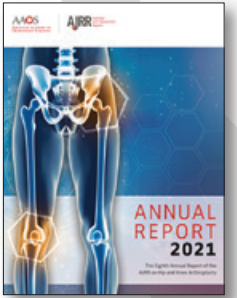
During 2021, AAOS registries comprised almost 2.4 million hip and knee surgeries from more than 1,150 institutions that submitted data, an 18.3% increase in total procedural volume compared with that in 2020. This represents a 40% capture rate of all TJA volume annually.

## Enhancements and reporting

**Ambulatory surgery centers (ASCs)** now have greater representation to demonstrate their value as viable sources of health care. Wanting to provide ASCs and private practices access to data quality, analysis, and benchmarking, AAOS actively engaged with the Ambulatory Surgery Center Association and began a pilot program that provides the data submission framework necessary for ASCs with low volume and/or limited technical capabilities.

**Patient-reported outcome measures (PROMs)** are increasingly being utilized to evaluate success of hip and knee arthroplasty procedures and facilitate capture and facilitate clinical use of this data. Specifically, AJRR continues to support the RegistryInsights® PROM platform for

facilities to easily collect and upload PROM submissions to the registry. These efforts have led to substantial growth in PROMs capture. By the end of 2020, 290 sites out of 1,152 (25.2%) have submitted PROMs, which is a 39% increase in sites compared to the 2020 AJRR Annual Report.



**In collaboration with Cohere Health**, an emerging high-growth digital health company, AAOS will embed its clinical practice recommendations into the care pathway guidelines included in the CohereNext® Platform. The platform brings to life evidence-based recommendations, making guidelines more readily available and more accessible for busy surgeons and care teams. Orthopaedic surgeons using CohereNext will be able to easily plan and preauthorize all the steps in the procedures and recovery phases. The platform will be rolled out initially to up to 10,000 unique surgeons in 12 states, with a nationwide launch to follow. AAOS and Cohere are exploring ways for participants to voluntarily use the AJRR to reduce prior authorization burdens and requirements.

**Tracking and monitoring outcomes** with longitudinal patient information continues to be a focus of the AAOS Registry Program. To help sites best utilize registry data for this purpose, RegistryInsights® has been expanded and enhanced. This allows individual participating institutions access to their own real-time dashboard and compare their metrics to the AJRR national benchmark. Recent enhancements for surgeons include the introduction of the Surgeon Dashboard.

## Quality programs

2021 saw the publication of three clinical practice guidelines (CPGs) and two appropriate use criteria (AUCs), which included the update to the 2013 Osteoarthritis of the Knee (Non-Arthroplasty) CPG. This CPG updated all 19 recommendations included in the 2nd Edition of this. Additionally, AAOS released an AUC on the Treatment of Distal Radius Fractures, which was based on the CPG that was created in partnership with the American Society for Surgery of the Hand. This AUC assists healthcare professionals in determining the appropriateness of treatments for distal radius fractures in adult patients (>18 years). Members can access all CPGs and AUCs through the OrthoGuidelines App.







# Advocacy matters

## Advocacy matters

# Advocating for orthopaedic interests

2021 was a year of numerous and significant advocacy accomplishments that positively impacted members, patients and the profession.

## Advocacy matters

### Mitigated Medicare Pay Cuts to Specialty Care

AAOS advocacy against the devaluing of surgical services, especially during the ongoing COVID-19 pandemic, continued throughout 2021 and most recently helped to delay an almost 10% payment in reductions scheduled for 2022. AAOS members helped to collect 250 congressional signatories on multiple letters to Congressional leadership in support of year-end legislation that delays the 4% Pay-As-You-Go (PAYGO) cut until 2023, delays the full implementation of the 2% sequester cut until July 2022 and drops the 3.75% Medicare fee schedule cut to 0.75%. The law provides short-term relief for physician practices across the country while AAOS continues to advocate for a long-term solution to Medicare's broken payment system.

### Law Passed to Protect Patients from Surprise Billing

AAOS members, along with the Office of Government Relations (OGR), continued working with Congress to protect patients from surprise medical bills and to avoid a federal benchmark approach – favored by insurers – for resolving out-of-network billing disputes.

Agencies released regulations for implementing the No Surprises Act. AAOS submitted two separate letters to the Biden Administration to ensure that congressional intent of the law was followed and to reemphasize AAOS's policy priorities. Separately, AAOS championed two Congressional letters to the administration that, combined, accumulated more than 210 congressional signatures.

### Reforming the Prior Authorization Process

AAOS members engaged with members of Congress through social media, grassroots and direct message to address the issue of prior authorization. Those efforts resulted in nearly 240 cosponsors signing onto the Improving Seniors' Timely Access to Care Act (H.R. 3173), which would reform the burdensome prior authorization process in Medicare Advantage Plans. Due to this widespread bipartisan support, companion legislation (S. 3018) was successfully introduced in the U.S. Senate later in the year.

### Convinced CMS to Reverse Elimination of the Medicare Inpatient-Only List

AAOS succeeded in persuading the Centers for Medicare & Medicaid Services (CMS) to consider patient safety concerns and reverse its elimination of the inpatient-only list. The 298 musculoskeletal procedures that were removed from the list on January 1, 2021, were reinstated on January 1, 2022, with the following exceptions: reconstruction of ankle and shoulder joints and lumbar spine fusion.

Additionally, the 255 procedures that were added to the ASC Covered Procedures List in 2021 will be removed, and a new stakeholder nomination process (yearly by March 1) for adding procedures to the list will begin in March 2022. In line with these policy reversals, CMS is returning to a two-year exemption period from medical review activities related to the Two-Midnight rule following the removal of a procedure from the initial public offering list.



## Orthopaedic Advocacy Week

A special Orthopaedic Advocacy Week was held in 2021 with the help of various state and specialty societies. AAOS furthered its commitment to leadership in advocacy across orthopaedics. It comprised various virtual advocacy activities for engaging members

and advancing the AAOS's Unified Advocacy Agenda: growing support with grassroots efforts, amplifying its message with social media, shaping policy through rulemaking, and donating to the OrthoPAC.

### ORTHOPAEDIC ADVOCACY WEEK BY THE NUMBERS

249

members participated in the event from 39 states and Puerto Rico.

582

letters were sent to congressional offices from the Advocacy Action Center.

81

members added their name to two regulatory AAOS-led letters.

109

new legislative cosponsors were generated for bills to reform prior authorization, expand telemedicine services and prioritize physician mental health.

### ADDITIONALLY

986

PAC donors contributed a total of \$270,000 during the Day of Giving, and 20% of contributions were new.

25%

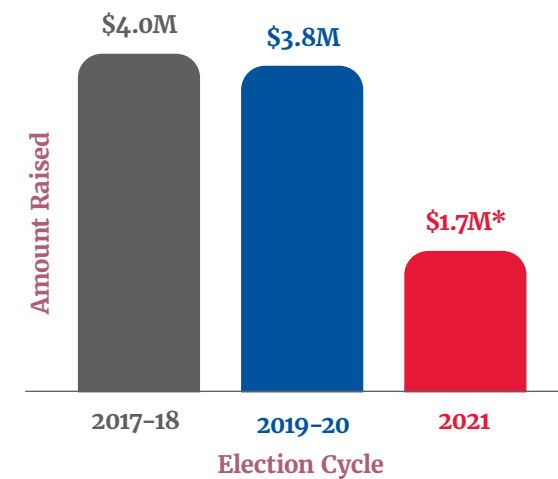
of PAC donors increased their contribution from 2020.

#OrthoAdvocacyinAction

## The Orthopaedic PAC

The AAOS Orthopaedic PAC (OrthoPAC) works to shape the future for members, patients and the orthopaedic profession. The OrthoPAC supports AAOS advocacy efforts that are guided by an agenda defined by the Advocacy Council each year. Despite a challenging year marked by political strife, the OrthoPAC remains the second largest PAC in the physician community and raised close to \$1.7 million alone in 2021.

### ORTHOPAC'S HIGH-PERFORMING ELECTION CYCLE



\* This number represents funds raised (hard and soft dollars combined) in the first half of the 2021-2022 election cycle.

Following political challenges at the beginning of 2021, the OrthoPAC paused all activity during the first quarter to reassess and revise its criteria for political contributions and to revamp its presence on the AAOS website and highlight its contributions, contributors and the members of the OrthoPAC Executive Committee to enhance its transparency.



AAOS Advocacy Council Chair, Douglas Lundy, MD, FAAOS (left) and OrthoPAC Resident Fellow Sarah Nelson, MD stand in front of the U.S. Capitol during the combined National Orthopaedic Leadership Conference/Fall Meeting.



## The OrthoPAC carefully considers many factors before contributing to federal candidates and legislators.

The OrthoPAC makes political contributions to candidates based on the AAOS Code of Ethics and Core Values of Leading to Serve, Shaping the Future and Excellence Together. The OrthoPAC Executive Committee is guided by a specific document, edited each election cycle, that assists with evaluating candidates based on their character, integrity and respect for human dignity, according to the following criteria:

1. Holds views on issues of importance to the care of musculoskeletal patients and the maintenance and betterment of the profession of orthopaedic surgeons
2. Receives positive input from the OrthoPAC members and stakeholders (AAOS Board of Councilors, AAOS Board of Specialty Societies, state societies, Capitol Club members, AAOS Advisor's Circle) in the candidate's specific district or state
3. Serves on a committee with jurisdiction over policy issues important to the care of musculoskeletal patients and betterment of the profession of orthopaedic surgeons

4. Holds an elected leadership position
5. Has worked well with the AAOS OGR staff and sponsoring or co-sponsoring legislation deemed important to AAOS
6. Has fellow orthopaedic surgeons and physicians running for office
7. Demonstrates electability to the specified office

In addition to the established criteria the OrthoPAC Executive Committee reviews open seats and challenger races. The input of all OrthoPAC members is valued. The insights and viewpoints of contributors are always welcome and play a vital role in the decision to support a candidate or officeholder.

## The OrthoPAC Advisor's Circle is the AAOS's premier corporate donor program

The OrthoPAC Advisor's Circle is a corporate donor program designed to provide leadership roles within the OrthoPAC to group practices and specialty societies of AAOS members. Membership in the Advisor's Circle maximizes political

and legislative opportunities for each group on a personalized basis. Today, it is 24 groups strong and represents over 9,000 orthopaedists nationwide.

Membership in the Advisor's Circle maximizes political and legislative opportunities for each group on a personalized basis.

## THANK YOU TO THE 2021 ADVISOR'S CIRCLE MEMBERS

# \$75,000

Rothman Orthopaedic Institute

American Association of Hip and Knee Surgeons

Premier Orthopaedics

# \$50,000

OrthoVirginia

Resurgens Orthopaedics

# \$25,000

American Shoulder and Elbow Surgeons  
American Society for Surgery of the Hand

Anderson Orthopaedic Clinic  
Atlantic Orthopaedic Specialists  
Campbell Clinic  
EmergeOrtho  
OrthoTennessee  
Signature Medical Group  
Tennessee Orthopaedic Clinics

# \$10,000

American Osteopathic Academy of Orthopedics (AOAO)  
Arthroscopy Association of North America (AANA)  
Delaware Orthopaedic Specialists  
First State Orthopaedics  
Midlands Orthopaedics  
OrthoAtlanta

OrthoSC  
Peachtree Orthopedics  
The Bone and Joint Center  
Tulsa Bone & Joint  
Valdosta Orthopedic Associates





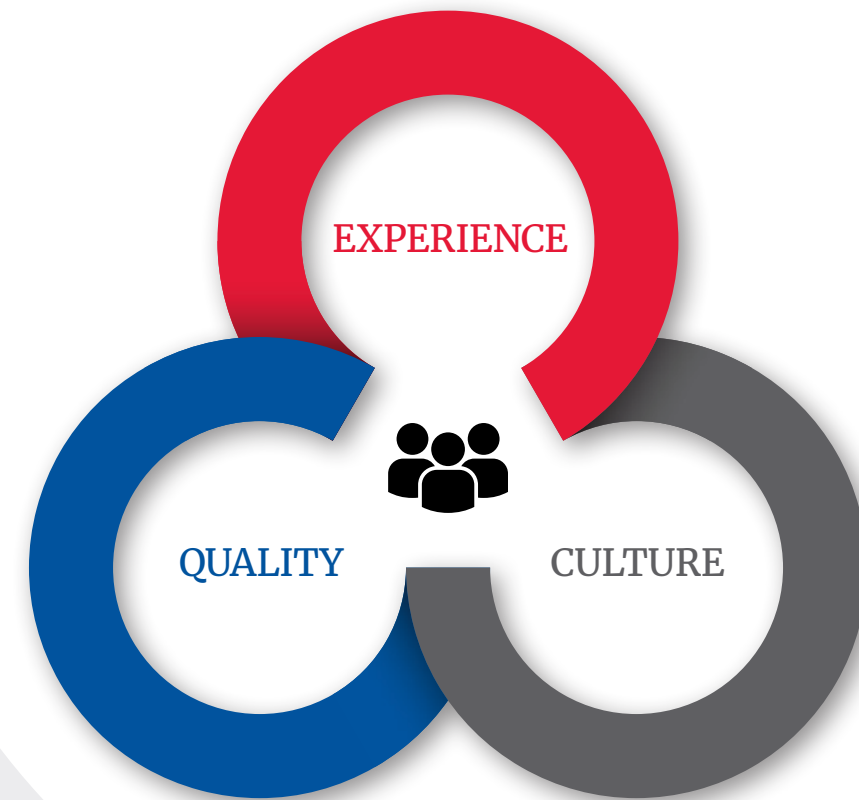
## Strategy matters

# Following the roadmap and meeting goals

AAOS remained focused on its five-year strategic plan, despite the continuing challenges presented by COVID-19.

Overall performance was strong as AAOS achieved over 90% of its 2021 strategic plan goals for execution across the organization and created significant value for members. AAOS stayed closely aligned with its strategic plan and core values which guide its decision making.

## Strategic plan goals



AAOS Core Values

**LEADING**  
to serve

**SHAPING**  
the future

**EXCELLENCE**  
together



Below are just a few of the notable successes that show AAOS's commitment to each goal of the strategic plan.



### EXPERIENCE

Deliver a personalized and seamless member experience

- Piloted a new resident curriculum
- Rescheduled and delivered a successful 2021 Annual Meeting
- Named a new JAAOS editor-in-chief



### QUALITY

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

- Worked with Congress to mitigate Medicare cuts to specialty care
- Launched the FTR
- Hosted the Biologics Symposium



### CULTURE

Evolve the culture and governance of AAOS's board and volunteer structure to become more strategic, innovative and diverse

- Held two Diversity Town Hall webinars
- Fully launched ALI and enrolled 193 members
- Fully integrated the OLC Education and Conference Center into the AAOS

In addition to the member-focused goals included in the AAOS Strategic Plan, fostering organizational excellence remained a priority.



**AAOS was recognized as a top employer in 2021.** AAOS earned three best workplace awards, including being named one of Chicago's Best and Brightest Companies to Work For and one of the Best and Brightest Companies to Work For in the Nation by the National Association for Business Resources. AAOS was also recognized as a Top Workplace by the Chicago Tribune. Earned three years into the Academy's

five-year strategic plan, these awards confirm the positive direction that AAOS charted in 2019. The strategic plan will continue to serve as a guidepost for making business decisions and driving action. AAOS appreciates the unwavering dedication and support from members, partners and staff, who support its Core Values of Leading to Serve, Shaping the Future, and Excellence Together.



Residents compare notes on an education strategy for ROCK during the Resident Assembly Education Forum at the AAOS 2021 Annual Meeting in San Diego.







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