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Welcome

Norman Chutkan Community Development Chairperson

Editorial

Dear Reader

The year 2020 started with some great news for AO Spine. Global Spine Journal will receive an impact factor in June 2020. This significant milestone comes after countless hours of work and support from the entire editorial board, the AO Spine membership, and the leadership of AO Spine and the AO. I congratulate everyone involved for this great achievement!

Behind the scenes, AO Spine continuously works hard to improve the membership privileges and add value to its membership program.

For the Membership program, we have added the following open access journals to the existing journal collection in order to make the search for articles more easy and convenient for you: Asian Spine Journal, JOR Spine, Journal of Orthopaedic Surgery and Research, Spine Surgery and Related Research, World Neurosurgery X, Coluna/Columna, and Journal of Orthopaedic Surgery.

For the Membership Plus option, we have introduced a new benefit for our readers: the Curated Articles. We have asked surgeons from around the world to share with us their latest favorite spine reads. In the first selection, our colleagues Matthew L Goodwin, Jeremy D Shaw, and Brandon D Lawrence share what they were reading in the fourth quarter 2019. We hope that you enjoy these articles and hope that you can take advantage of the benefits of your AO Spine Membership Plus entails. Please keep an eye out for the next edition of curated articles in the second quarter of 2020!

Also in this issue of the newsletter, we are featuring Professor Mohammad El-Sharkawi of Assiut University in Egypt. He has been a leading light in AO Spine, and has blazed a trail in teaching and research methodologies, supporting the next generation of spine surgeons as they make their mark.

This newsletter also shines a light on topic that many do not dare to speak openly about: burnout. The Global Spine Congress 2019 Best Paper Award winner highlighted the need for interventional programs for spine surgeons, 30 percent of whom report experiencing burnout. Ultimately, such measures to address surgeon burnout stand to shape *healthier* health care providers while leading to improved patient outcomes, fewer errors, and a more efficient health care sector.

In this issue, we also share the latest update on the AO Spine Bone Osteobiologics and Evidence (BOnE) classification, a path to evidence on bone grafts to improve outcomes. The AO Spine Knowledge Forum (KF) Degenerative is developing a much needed osteobiologics classification, the BOnE classification for short. With this classification, the KF will make it easier for all stakeholders—surgeons, patients, hospitals, insurance providers, and governments—to assess the level of evidence of a particular osteobiologic material to support its use.

Another important project of AO Spine research is the AO Spine RECODE-DCM. It sets research priorities and spearheads AO Spine Knowledge Translation. The Priority Setting Partnership arm of the AO Spine RECODE-DCM project recently held its final consensus meeting and agreed on the top ten research priorities for Degenerative Cervical Myelopathy.

With the Global Spine Congress in Rio de Janeiro, Brazil, only a few months away, we would like to share the preliminary program with you. The GSC will be the venue for a number of exciting events and I hope to see you there from May 20–23, 2020!

Last but not least, AO Spine Latin America has a lot of exciting news and initiatives, including the 2020 AO Spine International Observership Program, the Chairperson Education Program, and the results of their newly elected council members in Mexico and Colombia.

I hope you find this issue interesting and informative, and hope to see you in Rio de Janeiro in May!

Yours sincerely,

Norman Chutkan

Community Development Chairperson





Peer support: Mohammad El-Sharkawi

A leading light in AO Spine, Professor Mohammad EI-Sharkawi of Assiut University, Egypt, has blazed a trail in teaching and research methodologies, supporting the next generation of spine surgeons to make their mark. Here, Professor EI-Sharkawi explains why AO Spine is his family.

What is your specialty and what does a typical workday for you look like?

I'm an orthopedic spine surgeon, trained in Egypt and in Germany. I focus on deformities and degenerative conditions, but I do all kinds of spine surgeries. My typical week is spread over five days. I have commitments in my university from 8am–2pm doing surgeries, outpatient clinics, and teaching. I also have an administrative position as Vice Dean for Research and Post Graduate Studies, which takes time out of my medical practice, but I enjoy it. From 2–5pm I work in my private practice and I operate after that. I usually finish between 10pm and midnight. It's a long day but I do usually have two days for the weekend–unless I am travelling for AO Spine activities!

Looking back at your career, did you always want to go into spine or did you come to it by chance?

To tell you the truth, no. I always thought of spine surgery, but I was hoping to do microsurgery, which was new at the time. Spine surgery was my second choice, but I love it and I love the challenge. If I had to do it all over again, I would still choose spine. For young surgeons I really wish that they would consider not choosing what's available, but what they love to do. If you don't love what you're doing, you won't be good at it.

Who has most influenced you in your professional career?

I'm blessed because I've known so many people who really influenced my career. My late father was a professor of medicine. I learned a lot from him. Also, my mentor and senior professor, Professor Galal Z. Said, taught me everything I know and was the one who encouraged me to join AO. I'm trying to follow his footsteps.

How has spine surgery in the Middle East changed since you started your career?

I started in the early 90's, and the only spine surgery we were doing regularly was open discectomy and laminectomy. The specialty then started to evolve with the development of various spine implants and the introduction of newer technologies into my country. Things started to change rapidly, and we're now doing the most complex surgeries all over the region. As the biggest country in the region, Egypt has 100 million people and the highest number of universities. A couple of years ago, we treated almost 600 thoracolumbar fractures in my university hospital in one year. Other countries in the region may have faster access to the newest technologies, but we see and treat patients from all over the region and have many challenging cases here.

Can you tell us more about your work with AO PEER?

I had an interest in research a long time ago and I realized that I didn't know how to do it. I started searching around and did several courses on research methodology, which showed me there's a science to it-it has to be done in the right way. I also realized there were very few similar courses in my country and my region. Through my position in AO Spine I started pushing people to organize research courses. This was before AO PEER started. We had several research methodology courses in Dubai, and I chaired one in Cairo in June 2015. I then became Vice Dean for Research and Postgraduate Studies, so this is now part of my job-teaching people how to do research, organizing activities for them, trying to help them. I have a lot of people helping me with this in my university. We applied for Spine Research Mentorship and were chosen among a few centers around the world. Through this, we were also involved in two multi-center studies. After this, I got my certificate of training from AO PEER and applied to become a teacher. They chose me, and I taught in Davos this year. I enjoyed it greatly and gained a lot of experience. Having the chance to share this with AO PEER teachers from all over the world was really beneficial and enjoyable.

How does AO PEER help researchers?

AO PEER helps people follow the right process, from setting the research question onwards. We should not wait until the research is done and then teach people how to get it published. AO PEER is designed to walk you through the process, from initial concept to manuscript submission, from the very beginning to the last step. The great thing is, it can be adapted and used all over the world.

What lessons do you try to teach your own fellows?

In our university, we mentor our fellows but also encourage them to gain experience outside the country, maybe in Europe, in the Far East, or in the United States. I've always appreciated the need to see what other people are doing and see new ideas. We try to give them this opportunity through communication with centers all over the world and, as a recently accredited Spine Center, we are looking forward to receiving our first fellows through that.

How has AO Spine supported you in your own career?

It has supported me a lot. I attended my first AO course in 1997–before there was an AO Spine–and my first Spine course in 2005. I have been an AO Spine member since it began. Before that I was a member of AO Trauma. In 2012 I became Chairman of AO Spine Egypt and in 2016 Education Officer for the Middle East Region. Now I am the Chairperson for the Middle East and Northern Africa (MENA) region. It has been a long journey and every part of it has influenced my career, improved my practice, my communication skills, my knowledge, and my ability to transfer this to my colleagues and fellows. AO Spine is my family.

Will you be at Global Spine Congress in Rio de Janeiro in May?

I've been to Buenos Aires, Dubai, Milan, Singapore, and Toronto. Rio will be my sixth GSC, and I see how it's evolving and growing. If I'm going to choose one Congress to attend it will be this, because it's the biggest, it offers every spine surgeon what they need, whether they are a fellow or senior, specializing in deformity, fractures, or tumors. *If you are a spine surgeon, you have to be at Global Spine Congress.*

Biography:



Mohammad El-Sharkawi, MD

Chairperson AO Spine Middle East and Northern Africa (MENA) Senior Consultant of Spine Surgery, Assiut University Hospital Professor of Orthopaedic and Trauma Surgery, Faculty of Medicine, Assiut University, Egypt

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Battling burnout

GSC 2019's Best Paper Award winner highlights need for interventional programs for spine surgeons. More than 30 percent of spine surgeons worldwide report experiencing burnout, according to the Global Spine Congress 2019's Best Paper Award winner, Burnout and Quality of Life Among Spine Surgeons: Results of a Worldwide Survey. The results of the study—for which AO Spine member Alisson R Teles was lead author—indicate that depression, anxiety, pain, and difficulty with usual activities are all associated with professional burnout.

Characterized by emotional exhaustion, depersonalization, and decreased sense of accomplishment that leads to decreased effectiveness at work, professional burnout's prevalence among spine surgeons worldwide and its risk factors had largely gone unreported. Using an electronic survey of 818 AO Spine members from 87 countries in May 2018, the study's authors evaluated the prevalence of burnout, assessed the personal and professional characteristics associated with it, and examined burnout's relationship with spine surgeons' quality of life.

The majority of survey respondents were orthopedic surgeons (62.2 percent) with more than ten years in practice (43.2 percent), worked 40 to 60 hours per week (54.4 percent), and treated both adult and pediatric spinal pathologies (53.6 percent). High levels of emotional fatigue (18.1 percent) and depersonalization (23.2 percent), as well as low levels of fulfillment (21 percent), were reported.

The study also identified a number of independent burnout risk factors including being a fellow or resident, working more than 60 hours per week, and practicing in North America. Higher levels of emotional fatigue and depersonalization and lower levels of quality of life were associated with lower quality of life scores.

Overall, the study found a significant association between burnout scores and decreased general quality of life, indicating the need to develop interventional programs to better identify, prevent, and manage burnout among practicing spine surgeons.

While Teles' study focuses on spine surgeons, it echoes concerns raised by broader examinations of burnout among health care

workers. For example, a 2018 Harvard Business Review study analyzed data for two characteristics associated with burnout for more than 80,000 health care personnel–19,000 nurses, 5,000 physicians and 60,000 non-nurse/medical doctor (MD) personnel–from 40 health care systems in the United States. The study showed how those two characteristics–"activation" or the extent to which a person is motivated by his/her work and feels it is meaningful, and "decompression", the degree to which one can withdraw, recharge, and enjoy life outside of work–vary among the various groups and how they relate to resilience against burnout in each group. Researchers found that doctors, nurses, and nonnurse/MD personnel all had the same average level of activation, but physicians had lower decompression scores, showing that they were less able than others to withdraw and recharge. That study also found that decompression and activation are moderately correlated: "People who are better able to decompress are also somewhat more likely to feel activated in their work."

Another Harvard Business Review article, "When Passion Leads to Burnout", describes how the term "burnout" has been deprioritized for decades but the younger workforce's demand for more meaningful work is a growing concern. And it may finally be getting the attention it deserves: The issue has caught the attention of the World Health Organization (WHO), which calls burnout a "professional phenomenon" and includes burnout in its 11th Revision of the International Classification of Diseases (ICD-11).

While depression, anxiety, pain, and difficulty dealing with usual activities—all symptoms associated with burnout—are finally on the radar in the broader professional world, a Mayo Clinic study indicates that the average US physician now spends roughly half of his/ her workday and an additional 28 hours per month on nights and weekends completing electronic health records (EHR). Moreover, administrative efficiency measures along with patient satisfaction measures and productivity metrics are reshaping how many organizations define the meaning of "good doctor," according to the Mayo Clinic study.

A 2019 literature search, "A Review on Studies to Manage Physician Burnout," suggests that a focused approach with a standard protocol must be established by health care providers. Measures could include professional coaching and stress reduction programs, hospital protocols to work duty division and structured roles, and hospital-paid leave for physicians, as well as time off to pursue activities they are passionate about. Other recommended measures include funding for team activities to strengthen team relationships, and strict adherence to Accreditation Council for Graduate Medical Education work-hour guidelines. These recommendations dovetail with the recommendations in Teles' study results highlighting the need to better identify, prevent, and manage burnout among spine surgeons.

Ultimately, such measures stand to shape *healthier* health care providers while leading to improved patient outcomes, fewer errors, and a more efficient health care sector.



SPINE

Accepted for Impact Factor



Global Spine Journal accepted for Impact Factor

This acceptance means that Global Spine Journal will receive an Impact Factor in June 2020.

This amazing milestone comes only after countless hours of work and support from the entire editorial board, the AO Spine membership, and the leadership of AO Spine and the AO Foundation. As the editors-in-Chief of Global Spine Journal, we want to thank and acknowledge the encouragement of all of the individuals who helped create and cultivate the initial concept of the Journal, and all of those along the way who have helped to advance Global Spine Journal (GSJ) to be a leading platform for AO Spine.

We have been officially notified by our publisher, SAGE Publishing of this achievement. They have received the official word from Clarivate Analytics. They have been notified that we will be indexed in the 2019 lists! We will find out our score and placement in June when they release the 2019 Impact Factors. Once we find out this information, we will publicize it to everyone. All issues beginning with Volume 7, Issue 1 (February 2017) onwards will be indexed in the Clarivate Analytics Journal Citations Report (JCR) Science Edition.

Besides being indexed in JCR, Clarivate has also indexed GSJ in Science Citation Index Expanded (also known as Sci Search) and Current Contents/Clinical Medicine.

We are extremely proud of this accomplishment and we would like to thank our deputy editors, managing editor, publisher, authors, readers, reviewers, and everyone at AO Spine and the AO Foundation for helping make GSJ a leading journal in the field of spine surgery.

Best regards

Jeffrey Wang, MD Jens Chapman, MD Karsten Wiechert, MD Editors-in-Chief Global Spine Journal

Danielle Lieberman Managing Editor Global Spine Journal



The Global Spine Congress (GSC) 2020 preliminary program is now out—discover what's in store for the next GSC in Rio de Janeiro and register today

The Global Spine Congress (GSC) 2020 program will feature talks from leading international spine experts on hot topics in the field of spine care such as AI, Endoscopy, Robotics and Augmented Virtual Reality. Again, this year, AO Spine is organizing the popular session entitled "Women in Spine" which will continue the conversation on gender diversity in spine care. Pre-courses, taking place on Wednesday, May 20 will offer access to international medical expertise in spine care and research. Access the preliminary program here for a closer look.

Pre-course topics include:

Sports and spine symposium: a comprehensive approach to integrating successful spine care into sports medicine Endoscopic spine surgery: learning with KOLs and catching up with the learning curve AO Peer Principles of clinical research Virtual reality cadaver-less lumbar spinal procedures

Five reasons why you should attend:

Benefit from a wide range of plenary sessions, symposia and parallel scientific paper sessions Network with 2,000 spine professionals from around the world Discover the latest technology and techniques in spine care Access to the world's best research and clinical experts

Career development-learn new approaches in spine treatments

The GSC will be hosted at the Windsor Convention and Expo Center, the largest convention center in Rio de Janeiro taking place from **May 20–23, 2020**. The venue is in Barra da Tijuca, a vibrant and modern city, located on the outskirts of Rio and only 45 minutes from the Rio de Janeiro International Airport.

Be part of the discussion-register today!

If you haven't yet registered, make sure to do so soon. Remember, it pays to be an AO Spine member. Members receive a \$150 (USD) discount on GSC registration fees which is greater than the cost of membership. Sign up for membership today. Additional discounts also apply for medical or research students, residents, fellows, and

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participants from low-income countries.

Please note that GSC pre-registration is required for several pre-courses, so be sure to register now as seats are filling up fast.

For details on pricing information, schedule, and registration, click HERE.

We look forward to seeing you in beautiful Rio de Janeiro!

Mark your calendars!





"The GSC 2020 scientific program is packed with innovative and hot topics to fulfill your expectations. The wide variety of pathological and surgical techniques, such as degenerative, trauma, deformity, artificial intelligence, endoscopy, robotics, augmented virtual reality, will be presented by leading spine experts using innovative and interactive teaching methodologies. Pre-courses looking at high tech spine surgery and education in clinical research are also scheduled."

Asdrubal Falavigna, scientific program committee co-chairperson

AO SPINE



AO Spine RECODE-DCM sets research priorities and spearheads AO Spine Knowledge Translation

The Priority Setting Partnership (PSP) arm of the AO Spine RECODE-DCM project recently held its final consensus meeting in New York and agreed on the top 10 research priorities for Degenerative Cervical Myelopathy (DCM). An ambitious Knowledge Translation (KT) plan was developed and included in the study already early on, to make sure these priorities are the focus of future DCM studies.

The AO Spine Research Objectives and Common Data Elements for Degenerative Cervical Myelopathy (RECODE-DCM) project has three interlinked aims: to create a list of unanswered DCM research questions ranked according to priority, to establish a standardized definition for DCM, and to create a standardized set of baseline characteristics and outcomes which should be measured in all DCM research.

"It takes an average of 17 years for research evidence to reach clinical practice," Co-PI Benjamin Davies says. *"We wanted to accelerate the process and to empower our stakeholders."*

Enabling the desired change

For successful KT, you need to know your stakeholders and understand what prevents or helps them use the knowledge.

"The most important aspect of KT is to identify why it is important to translate each piece of knowledge, who needs it, and what you want them to do with it. KT beginners typically jump straight into the implementation and ignore the planning," KT expert Lisa Petermann says. *"KT is about people, communicating with the right people, and motivating stakeholders to adopt new actions."*

Toto Gronlund from the James Lind Alliance and Iwan Sadler representing people affected by myelopathy participated in the PSP and the KT workshop. Both stress the importance of thinking about KT early on in your project. "Understanding the full experience of living with myelopathy and the urgency of creating patient-centred resources is important," Sadler says.

Gronlund recommends including core information covering the whole myelopathy journey. "For example, in the PSP workshop we learned about the importance of early diagnosis and raising public awareness about the signs and symptoms for people living with myelopathy. Research should not be in isolation."

An internationally recognized collaboration

The RECODE initiative and network has already been recognized by the Lancet Neurology (Vol.18(7)), and in the AO Davos Courses opening address in December 2019.

"We are thrilled by the interest this partnership has created; there clearly is a need. In the end, we could only invite one in five volunteers to participate in the consensus meeting," Knowledge Forum Spinal Cord Injury Project Manager Olesja Hazenbiller says.

AO Spine is excited to continue the ethos of collaborative research.

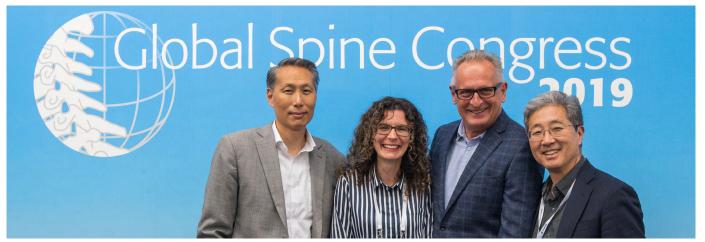
AO Spine received over 3'500 research suggestions from a wide range of stakeholders around the globe. Out of these, 76 summary questions were generated. Based on their subsequent ranking, 26 questions were considered for the final workshop, where a consensus was found on the top 10 research priorities.

The main objective of the KT strategy is to move the priorities forward by encouraging scientists, funders, and policymakers to put their focus into these priorities, to study them, to collect and disseminate data.

The wording of the top 10 questions is being adjusted to serve as research questions. Results will soon be published, and the final outcome will be launched at the GSC in Rio de Janeiro, Brazil, in May 2020. The next objective is to develop a Core Outcome Data Set (COS), the minimum set of features that should be measured in all DCM research, and a common definition for DCM.

AO Spine thanks all participants in the process so far. We are excited to continue the strong ethos of collaborative research.





The AO Spine KF Degenerative Steering Committee members Jeff Wang (left) and Hans-Joerg Meisel with Chairperson S Tim Yoon (far right) and Zorica Buser, Toronto, Canada, May 2019.

The AO Spine BOnE Classification—a path to evidence on bone grafts to improve outcomes

The AO Spine Knowledge Forum (KF) Degenerative is developing a much needed Osteobiologics Classification, the "BOnE Classification" for short. Many surgeons are using osteobiologics that may have questionable efficacy, sometimes at significant cost. With this classification, the KF will make it easier for all stakeholders-surgeons, patients, hospitals, insurance providers, and governments-to assess the level of evidence of a particular osteobiologic material to support its use.

Chairperson and Principal Investigator (PI) S Tim Yoon explains there is currently a lack of governmental regulation regarding many classes of osteobiologics. "We have a situation where sometimes we have very scarce scientific evidence to show the efficacy of the osteobiologics in clinical use."

"The BOnE Classification is an evidence evaluation tool that can lead to better choices."

The AO Spine BOnE Classification is a tool designed for evidence evaluation. Yoon explains it will provide a way to classify evidence by classifying osteobiologic-related studies. "This in turn will provide an evidence level or even evaluation of an osteobiologic. Hopefully it will lead to better choices by purchasers and encourage vendors to develop sound scientific evidence to show the efficacy of their products."

Co-PI Zorica Buser agrees there is a desperate need for a tool to rate biologics. "Currently the spine field is flooded with osteobiologics that cost a lot, however, the evidence is missing to justify the widespread use. The BOnE Classification will close this gap and help our spine community understand what biologics have been vetted with evidence, ultimately leading to better treatment planning and patient outcomes."

Treatment planning simplified

There are three main levels of evidence in the Classification: human, animal, and in vitro data. Each of the major levels is further subclassified into four categories. The highest level of evidence is a well performed clinical randomized controlled trial and the lowest level of evidence is non-quantitative in vitro data. (1) Already in the early stages, the KF tested the BOnE Classification on a few biologics. "Not surprisingly, some of the biologics that are commonly used received a low grade with our classification. This confirms that osteobiologics use is not evidence driven, but often sales force driven," Buser says. The KF Steering Committee member Jeff Wang also keeps highlighting the issue.

"The AO Spine BOnE classification will be a great medium for collaborative interactions."

"We hope to build a consensus acceptance on this classification system. Eventually, we could have every osteobiologics paper classified as it is published in the scientific journals," Yoon explains. The aim is to create a living tool with the latest information. This will bring the spine community certainty of the grade given to a particular biologics. Based on the grade, surgeons, researchers, and industry can make decisions on next steps.

Buser encourages all surgeons to familiarize themselves with the AO Spine BOnE Classification. "The BOnE Classification will simplify surgeons' decision making when it comes to choosing which osteobiologic to use. It will help navigate through the overwhelming number of biologics and their various generations."

To learn more, join the AO Spine KF Degenerative symposium on "Current clinical evidence for osteobiologics in spine surgery: redefining what we know" at the Global Spine Congress in Rio de Janeiro, Brazil, in May.

(1) Wang JC, Yoon ST, Brodke DS, Park J-B, Hsieh P, Meisel H-J, Buser Z Development of AOSpine BOnE (Bone Osteobiologics and Evidence) Classification. [E-pub] Global Spine Journal, 2019.





AO Spine Mexico and Colombia elect new council members

New country council members in Mexico and Colombia will begin their three-year terms on February 1, 2020, following recent elections in those countries.

Based on votes cast by the countries' electorates of active members, the newly elected members were approved by the AO Spine Nomination Committee (NomCom).

In Mexico, Oscar Martinez was elected country council chairperson and will serve until January 2023. He joins Education Ortho representative Cristóbal Herrera, who took office in October 2018 and serves until September 2021, and Education Neuro representative Sergio Castillo, who took office in October 2018 and serves until September 2021.

"We would like to thank the former council members for their highly important contribution towards the development of AO Spine Latin America and to welcome the new members and wish them successful and productive terms," Juan Emmerich said.

In Colombia, Rodolfo Paez was elected country council chairperson and will serve until January 2023. Elected as Education Ortho representative was Juan Manuel Sierra, whose term runs until January 2023. Paez and Sierra join Education Neuro representative Julián España, who will serve until September 2021.

AO Spine Latin America Chairperson Juan Emmerich expressed thanks to retiring council members and welcomed the newly elected chairpersons and representatives.



Chairperson Education Program in Latin America

The latest edition of the Chairperson Education Program (CEP) took place in Panama City from November 13–14, 2019, with nine participants from eight countries. The program offers tools and training to develop AO members into better teachers and experts in education.

In the AO Foundation, faculty development is the key for members to achieve successful teaching roles, providing them with opportunities to challenge themselves while advancing their career.

Alexandre Jaccard from Brazil was extremely happy with the event that catered for his strong educational motivation: "I enjoy sharing knowledge, encouraging people, and inspiring students. For me, CEP was the biggest event of 2019! It made me a better teacher and gave me all the tools I need to organize events with AO excellence."

Combining the elements for excellence in education

The CEP program duration was six weeks. It started with online preparation five-weeks prior to the face-to-face event; and the one-and-a-half day in-person event was again followed by a one-week online follow-up. The participants were equipped not only with theoretical understanding but also with practical skills required to understand and combine different elements that are needed to compose an effective educational event. Upon program completion, participants can apply the key principles of curriculum design and management to AO events. They will be able to base their instructional design on problem identification, needs assessment of target learners, learning objectives, educational methods, evaluation, and feedback.

Participants of the CEP are well placed to succeed as chairpersons of AO educational events with the broad range of educational principles and best practices they learned.

According to Alfredo Guiroy from Argentina, the most relevant learning was to plan according to different teaching modalities. A couple of years ago, Guiroy had attended the AO Faculty Education Program, and claims it was the best educational experience he had ever had. "Therefore, my expectations for the CEP course were extremely high! Nevertheless, the course exceeded my expectations."

"I think the most important thing I learned was that the planning of the different teaching modalities must be extremely thorough to achieve the desired results in terms of learning. I am very grateful to AO Spine for giving me the opportunity to attend these courses, and I hope they reflect in better performance when organizing future activities," Guiroy concludes.

Overview of AO Foundation Chairperson Education Program:

Co-chairpersons: Asdrubal Falavigna (Brazil), Juan Emmerich (Argentina) Online preparations: October 01–November 12, 2019 (approx. 17h) Face-to-face event: November 13–14, 2019 in Panama City, Panama Online follow-up: November 15–22, 2019

Participants:

Alexandre Jaccard (Brazil), Alfredo Guiroy (Argentina), Alfredo Vásquez (Peru), Carlos Arias (Ecuador), Esteban Araya (Costa Rica), Pedro Reyes (Mexico), Rafael de Souza (Brazil), Ricardo Bermudez (Panama), Roberto Abreu (Dominican Republic)



AO Spine International Observership Program in Latin America

An impressive thirty-four spine surgeons from 10 countries across Latin America applied for the 2020 AO Spine Latin America International Observership Program. The program is designed to ensure that the knowledge and skills spine surgeons acquire in AO Spine educational events will be carried into practice and applied into their daily work.

The observership program is a unique opportunity for AO Spine surgeons to experience the complexity of certain pathologies and techniques. It covers a wide range of centers around the world and includes also non-AO Spine centers. It is a practical way for Latin American AO Spine members to advance their professional career. And it can directly benefit the lives of patients.

The application period for the current program closed on November 30, 2019, and the applications are currently under review. Applications were received from candidates in the following countries:

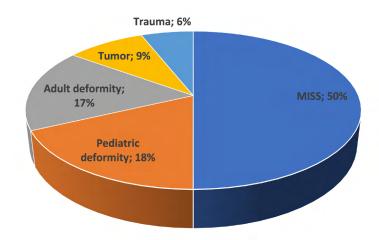
Argentina	10
Brazil	10
Peru	4
Colombia	2
Mexico	2
Venezuela	2
Chile	1
Costa Rica	1
Dominican Republic	1
Ecuador	1

Learn from the best

For a period ranging from one to four weeks, participants will observe skilled spine surgeons working with a specific technique or pathology, such as Minimal Invasive Spine Surgery (MISS), trauma, deformity, or tumor.

The goal is to learn and develop skills with some of the world's best experts in the field of spinal disorders and to acquire knowledge from renowned surgeons. The AO Spine program brings together experienced surgeons who are willing to pass on their knowledge and younger colleagues who are eager to learn and apply new skills to their clinical practice.

With half of the candidates interested in MISS, it was by far the most popular technique selected for the 2020 round, followed by pediatric and adult deformities, tumor, and trauma:



We look forward to reporting back on the success of this exciting opportunity in our upcoming Newsletters. Registrations for the next round of the Observership Program will open in September 2020.

AO SPINE



AO Davos Courses another success story (December 8–11, 2019)

Following last year's great success, the AO Spine courses focused again on minimally invasive spine surgery (MISS). In addition, for 2019, a complex cervical problems course was added to the program.

Over three days, participants experienced expert-level teaching on micro-decompression, endoscopy, percutaneous fixation, and complex cervical spine surgery. Furthermore, the famous and very popular "Good-bad-ugly: a case that thought me a lesson" sessions offered a great networking platform between course participants and faculty members.

Find a selection of event pictures from the AO Spine Courses 2019 below.

Don't forget to save the date for the next AO Davos Courses, which will take place from December 6–9, 2020.

We hope to see you in Davos in December!





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