

Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Elsevier hereby grants permission to make all its COVID-19-related research that is available on the COVID-19 resource centre - including this research content - immediately available in PubMed Central and other publicly funded repositories, such as the WHO COVID database with rights for unrestricted research re-use and analyses in any form or by any means with acknowledgement of the original source. These permissions are granted for free by Elsevier for as long as the COVID-19 resource centre remains active. Contents lists available at ScienceDirect



Journal of Cardiothoracic and Vascular Anesthesia

journal homepage: www.jcvaonline.com

Editorial

Coming to Terms With a New Normal: Recovery, Resilience, and Opportunities in a Post–COVID-19 World





The COVID-19 pandemic has caused enormous upheaval requiring numerous changes and adjustments not only in our personal lives but also in our professional worlds. As we begin to imagine a future beyond the immediate crisis caused by COVID-19, we have an opportunity to use this moment of transition and disruption to promote positive change and innovation in our professional environments and professional communities. A reflection on the changes brought by the pandemic, seen in the context of several forces that have been challenging traditional professional structures in the past several decades, provides some insight into the opportunities that this moment offers to create a new norm and address longstanding issues faced by our professional anesthesiology societies.

The COVID-19 pandemic has wreaked profound global upheaval and disruption. Unfortunately, with new rapidly spreading viral variants, it appears that severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) is on its way to becoming an endemic disease that indefinitely will be with us.¹ Similarly, it is increasingly evident that, rather than coming to a definitive resolution, the end to the pandemic will be more of a slow evolution into a new normal. We are now left to decide how we will respond to these changes: Which changes will we embrace as new opportunities, and which changes, because they threaten systems we value, will we need to manage with innovative solutions?

One question is how our professional societies and organizations in anesthesiology will respond to the changes brought on by the pandemic. This moment of cultural disruption provides a unique opportunity to reexamine, and possibly reenvision, the way our anesthesiology professional societies are structured, how they engage with their members, and how they will lead our professional communities going forward.

The pandemic has accelerated the impact of several ongoing challenges to the traditional models for anesthesiology societies and professional organizations.² Among the forces for change that have been enhanced by the pandemic are the following: new technologic developments and enhanced adoption of digital technologies by physicians; an increased awareness and attention to the need to promote diversity, equity, and inclusion in our professional environments; and the limitations of traditional financial structures for our professional organizations. Although many of these forces have been developing during the last decade or so, the pandemic has made these pressures even more acute. It now is critical that we recognize fully, both their impact on our organizations and the opportunities they present for enhancing our professional institutions.

Expanding Digital Technologies and the Decentralization of Medical Information

The decentralization of information caused by digital technologies presents a significant challenge to the traditional structure of professional anesthesiology societies. Prior to the pandemic, national society meetings already were beginning to experience competition for their professional audiences from a growing variety of online educational offerings. In addition, social network platforms have democratized professional discourse and offered alternative mechanisms, outside of professional societies, for the dissemination of new research, publications, or guidelines, for the sharing of educational programming such as webinars, podcasts, or "tweetorials," and for the creation of professional networks.^{3,4} These new forums are challenging the traditional role of national societies as the primary platforms for these professional exchanges.

The pandemic and the restrictions it has brought on social contact and travel have resulted in a massive and rapid adoption of digital technology. The urgent need for timely information and educational content about COVID-19 brought an enormous volume of physicians to online platforms, including many physicians who previously never had interacted with virtual forums. As the pandemic has progressed, it appears that this enhanced engagement with online professional activity does not appear to be waning. The experience of D.O.'s

continuing medical education office at Stanford University suggests that engagement with online and virtual education is persisting, and, even a year or so in, remains at relatively high levels. This may be due to the relative ease of use, decreased time commitment, and flexibility inherent in online education that make it increasingly attractive to physicians with an everincreasing clinical and professional workload.

Although the new digital professional environment is threatening the traditional ways our professional societies "do business," it also provides an important opportunity for these organizations to innovate and evolve. By embracing these technologies, societies potentially can enhance engagement with their members and even draw new, previously untapped, physician populations into our organizations. For example, the conversion of historically in-person conferences to virtual platforms during the pandemic allowed many professionals (eg, trainees, junior faculty, private practice physicians, and physicians managing childcare responsibilities), who previously had not engaged in national in-person meetings due to cost constraints, work conflicts, and personal responsibilities, to engage directly with the larger professional community through online programming, social media, and virtual meetings.

This potential for enhanced engagement was reflected in the experience of many anesthesiology societies when they converted their annual meetings to virtual platforms this past year. Even with limited experience in virtual programming, many annual conferences hosted highly successful virtual meetings. Most programs attracted similar numbers of attendees, and some even had significant increases in the numbers of attendees, compared with previous in-person conferences. The Society of Cardiovascular Anesthesiologists' (SCA) annual meeting, for example, had slightly increased attendance overall, with a doubling of attendance at the smaller Thoracic Anesthesia Society component meeting.

Although many anesthesiology societies are eager to return to in-person and "back-to-normal" programming, the option of virtual conferencing and the new adoption of digital platforms raises an interesting debate regarding the future of the in-person professional conference.⁵ Virtual conferences, although not perfect, allow for the participation of a broader audience, have a lower carbon footprint, offer decreased costs for participants (eg, lower registration fees, no travel expenses), and lower financial risk for the hosting organization. Although the loss of serendipitous interaction of in-person events is a concern for many, online platforms can open the door to virtual networking and collaborations that can be continued and sustained, through online technologies, between meetings. These connections made online are no less valuable as they often lead to future professional collaborations. Recognizing this, several anesthesiology societies have started to use these online community forums to engage their members (eg, the American Society of Anesthesiologists' ASA Community, the Society of Cardiovascular Anesthesiologists' SCA DocMatter, the Association of University Anesthesiologists' AUA DocMatter).

If anesthesiology societies want to stay relevant and compete in the new digital information environment, we will need to integrate online strategies and virtual platforms into our educational and professional offerings. This may mean that national societies offer hybrid options for national meetings or maybe develop more robust year-round online activities to increase member engagement. Or, perhaps, professional societies should rethink the purpose and structure of in-person meetings to enhance and fully harness the benefits of an on-site audience.

To warrant the time and expense of traveling, in-person meetings may need to be more intentional about fostering direct participation, interaction, and inclusion of all attendees. Groups that may have felt like "outsiders" at these meetings in the past (eg, women, underrepresented minorities, private practice physicians) might be more likely to attend in-person programs that create a meaningful and inclusive experience for them. For instance, Salem et al. demonstrated that small changes in the management of question-and-answer sessions at professional conferences (ie, enhancing the number of women moderators and selecting women to ask the first question) significantly decreased sex discrepancies in who asks questions and speaks in these forums at national meetings.⁶

Although many directions can be taken, it is clear that digital technologies are reshaping how we interact professionally and, going forward, professional societies will need to rethink their traditional programming and mechanisms of interacting with professional membership.

Pressure to Address Diversity, Equity, and Inclusion

A second challenge to the "old normal" that the pandemic has highlighted is an increasing dissatisfaction with the lack of racial, gender, and age diversity in many of our professional specialties and in our professional societies. Already-existing professional gender disparities in medicine were increased further by the pandemic. The closure of schools and the related increased childcare responsibilities disproportionately affected women physicians, especially those early in their career, and forced large numbers of women to decrease their professional work or even to exit the job market.⁷ Overall, employment statistics during the pandemic demonstrated such dramatic job loss among women in all sectors-and notably highest for non-White and minority group women-that the economic recession associated with the pandemic has been labeled a "she-cession."⁸ In addition, the reported rates of psychologic distress during the pandemic were notably higher for women, and for women with children, were 1.5-to-2 times that reported by men (either with or without children).⁹ Even before COVID-19, women in medicine were noted to have higher rates of burnout and depression than men and 130% higher rates of suicide than the general population. COVID-19 has further accentuated the challenges faced by the female physician workforce.¹⁰

Professional advancement of women in medicine also has been significantly and negatively affected by the pandemic. Several studies have demonstrated that gender disparities in publication increased dramatically during the pandemic.^{11,12} This further expansion of the existing historic gender gap in publication has significant, long-lasting professional implications for women.

Diminished productivity during the pandemic could hamper women for decades as they compete for grant opportunities and pursue academic advancement against male peers who had unchanged or even augmented productivity during this time.

The impact of the pandemic on both gender and racial disparities has brought renewed scrutiny to issues of representation and diversity in our professional organizations. In anesthesiology, similar to many other medical fields, leadership in professional societies historically has been predominantly male, White, older, and academic. Deliberate efforts to promote diversity in our organizations clearly are needed if we are going to create communities that are attractive to women and underrepresented minorities. In addition, our professional societies need to be more responsive to other important professional demographic groups, such as younger physicians (an estimated 25% of anesthesiologists are <40 years old)¹³ and private practice physicians. In particular, the concerns and interests of these groups must be deliberately addressed and attended to by leadership at the highest level of these professional societies. For example, the Society of Cardiovascular Anesthesiologists has created 2 "early-career" director positions, both of whom are full voting members of the SCA Board of Directors and can provide valuable insights from the perspective of members who typically are not included in leadership. Other professional societies should consider undertaking concerted, visible efforts to engage members of private practice and early-career physicians to broaden their reach and bring new perspectives and talent into our specialty overall.

Another potential way for societies to appeal to a broader professional community is to use special interest groups within the society structure. For example, the SCA Women in Cardiothoracic Anesthesiology (WICTA) special interest group has enhanced engagement with women in cardiothoracic anesthesiology by building a specific community for women within the society. WICTA has synergized with SCA membership engagement efforts by providing a pathway for women, many of whom did not previously interact with the SCA, to become active members and dedicated contributors to the society activities. Not only has this model been used successfully by several anesthesiology societies (eg, American Society of Regional Anesthesia's Women in Regional Anesthesiology and Pain Medicine, Society of Critical Care Medicine's Women in Critical Care Medicine, and ASA's Committee on Women Anesthesiologists), it could be used for other demographic groups as well. Private practice physicians or earlycareer physicians, for instance, might be more inclined to join our professional societies if they had their own special interest group, within the society, to support their unique professional interests.

In addition, societies can improve engagement with their professional communities by making intentional efforts to expand the demographic groups represented in their leadership committees, speaker panels, guidelines committees, professional awards, and research grant recipients. By ensuring all members of our professional community are represented in our national society forums, our professional societies can increase their relevance, reach and impact on our professional communities.

Shifting Financial Environment

Furthermore, the pandemic has challenged the traditional financial models for our professional societies. The historic reliance on annual meeting registration as a major revenue source became a significant liability during the pandemic when many annual meetings were cancelled. New alternative financial models to support professional society work not only may address the constraints of this current model but also may allow professional societies to explore new roles that increase their relevance. These new financial models could include a shift toward online, fee-based educational offerings or networking opportunities that could help societies decrease their reliance on annual meeting registration. In addition, societies may need to consider new roles, such as legislative and professional regulatory advocacy. Although many societies are not able to engage in political advocacy due to nonprofit status, today's professional environment with changing financial structures, new payment models, and competition from nonphysician providers is making these issues increasingly important to their members. By reexamining the roles that our professional anesthesiology societies take in our professional communities, we may be able to be more impactful, relevant, and more attractive to a wider audience of professional colleagues.

The Road Forward: Creating a New and Better Normal

The pandemic has brought enormous changes to our world. Although we often assume recovery means a return to the "normal" of the past, perhaps we should consider using this moment to create a "new and better normal." Change, though sometimes difficult, also brings an opportunity for innovation. So, before we rush to "return to normal," perhaps we should pause, take stock of where we are, and consider what is working in our professional environments and what needs a new approach.

Conflict of Interest

None.

Daryl Oakes, MD^{a.b.1} Emily Methangkool, MD, MPH^c ^aDepartment of Anesthesiology, Perioperative and Pain Medicine, Stanford University School of Medicine, Stanford, CA ^bAssociate Dean, Post Graduate Medical Education, Stanford Center for Continuing Medical Education, Stanford School of Medicine, Stanford, CA ^cDepartment of Anesthesiology and Perioperative Medicine, David Geffen School of Medicine, University of California, Los Angeles, Los Angeles, CA

References

- 1 Yong E. How the pandemic now ends. Available at: https://www.theatlantic.com/health/archive/2021/08/delta-has-changed-pandemic-endgame/ 619726/. Accessed Novemer 9, 2021.
- 2 Methangkool E, Mariano ER, Oakes DA. Are anesthesiology societies at risk of becoming obsolete? Perspectives on challenges and opportunities for moving forward. Int Anesthesiol Clin 2020;58:70–7.
- 3 Luc JGY, Stamp NL, Antonoff MB. Social media in the mentorship and networking of physicians: Important role for women in surgical specialties. Am J Surg 2018;215:752–60.
- 4 Luc JGY, Stamp NL, Antonoff MB. Social media as a means of networking and mentorship: Role for women in cardiothoracic surgery. Semin Thorac Cardiovasc Surg 2018;30:487–95.
- 5 Dua N, Fyrenius M, Johnson DL, et al. Are in-person scientific conferences dead or alive? FASEB BioAdvances 2021;3:420–7.
- 6 Salem V, McDonagh J, Avis E, et al. Scientific medical conferences can be easily modified to improve female inclusion: A prospective study. Lancet Diabetes Endocrinol 2021;9:556–9.
- 7 Byerly SI, Goff KL. The effects of COVID-19 on women physicians. ASA Monitor 2021;85:28–9.

- 8 Mason CN, Flynn A, Sun S. Build(ing) the future: Bold policies for a gender-equitable recovery. Available at: https://iwpr.org/wp-content/ uploads/2020/11/Policies-for-a-Gender-Equitable-Recovery-Finalsm2.pdf. Accessed Novemer 9, 2021.
- **9** Zamarro G, Prados MJ. Gender differences in couples' division of childcare, work and mental health during COVID-19. Rev Econ Househ 2021;16:1–30.
- 10 Afonso AM, Cadwell JB, Staffa SJ, et al. Burnout rate and risk factors among anesthesiologists in the United States. Anesthesiology 2021;134:683–96.
- 11 Woitowich NC, Jain S, Arora VM, et al. COVID-19 threatens progress toward gender equity within academic medicine. Acad Med 2021;96: 813–6.
- 12 Lerchenmüller C, Schmallenbach L, Jena AB, et al. Longitudinal analyses of gender differences in first authorship publications related to COVID-19. BMJ Open 2021;11:e045176.
- 13 Baird M, Daugherty L, Kumar KB, et al. Regional and gender differences and trends in the anesthesiologist workforce. Anesthesiology 2015;123:997–1012.