

COVID-19: bringing out the best in anesthesiologists and looking toward the future

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Anesthesiology is listed among professions that feature prominently in a book by David Zweig, “Invisibles: The Power of Anonymous Work in an Age of Relentless Self-Promotion.”¹ Zweig explains that there are three traits common to individuals who excel in these invisible roles: (1) ambivalence toward recognition; (2) meticulous attention to detail; (3) willingness to assume responsibility.² After an interview with one anesthesiologist, Zweig comments, “He could have gone into any number of specialties within medicine, but he chose to do something where when he did his job perfectly, the patients aren’t really going to think of him that much.”²

Today, people around the world are thinking about anesthesiologists a lot more, and *Time* magazine even featured an Italian anesthesiologist in a special report on Heroes of the Frontlines.³ These recent months battling COVID-19 have been a “once-in-a-lifetime” event for all of us. Our hospitals have all been affected, and thousands of health-care workers have been infected.⁴ Some of us have been deeply affected personally, those who have dealt with the disease themselves and those who have supported family members in quarantine. The closing of schools, daycare facilities, and public places by way of “shelter in place” orders have placed additional strain on working parents within our anesthesiology community, and we have also had to field difficult questions from loved ones who are understandably anxious. Sheltering has had the unintended effect of social isolation through the inability to meet one another in person and placing our favorite pastimes on hold. Professionally, anesthesiologists have risen to the challenge of caring for critically ill patients with COVID-19 infection, and all of us have seen unprecedented changes in our daily practices with the elimination of scheduled elective surgery and conversion of wards and even operating rooms into intensive care units to accommodate a massive influx of patients.

However, as we reflect on current events, there has been some good in all of this darkness. People at work and in our communities have pulled together to support each other. Physical distancing has, for the most part, been adhered to and in many parts of the world this has precipitated “flattening of the curve”⁵ that is preventing our burdened healthcare systems from becoming overwhelmed. For those of us in leadership roles, this crisis has been a revelation in many ways. First, we have been simply amazed and incredibly grateful for our colleagues who have stepped up to contribute and put in many extra hours of work to train, change protocols and

care models, and cover clinical work for colleagues while responding to an emerging pandemic generating a tidal wave of critically ill patients. Many of our anesthesiologists in our departments have risen to leadership challenges: filling roles that did not exist before COVID-19, solving problems that we have never faced before, developing clinical innovations, supporting each other, and setting up new patient care services in record times. Around the world, colleagues have reached out to each other through social media and new videoconferencing technologies to communicate, share information, and offer advice. This crisis has revealed some weaknesses in our systems, but more than anything we have seen the beauty of human relations and the power of kindness expressed in the support of colleagues, friends and neighbors.

As physicians who double as hospital administrators and clinical specialists in regional anesthesia and acute pain medicine (RAAPM), we share a unique perspective. These last few weeks have really emphasized the importance of regional anesthesia in our practices. With COVID-19 being a respiratory illness, the American Society of Regional Anesthesia and Pain Medicine (ASRA) and European Society of Regional Anesthesia and Pain Therapy (ESRA) have recommended regional anesthesia over general anesthesia whenever feasible for patients having eligible surgeries to avoid airway manipulation and tracheal intubation which is an aerosol-generating procedure.⁶ In obstetric anesthesia, science supports neuraxial analgesia as pain management for women in labor, but the known benefits of using neuraxial anesthesia to avoid general anesthesia are even more relevant today when considering the potential risks associated with emergency airway management and general anesthesia for cesarean delivery.

We’ve always been believers in the power of regional anesthesia, but this crisis has further emphasized its clinical advantages as well as the critical role of regional anesthesiologists and acute pain medicine specialists in the care of our patients. In some of our health systems, RAAPM is nested within a Perioperative Surgical Home model⁷ and the anesthesiologist is assigned to this service daily with no operating room responsibilities, and the RAAPM service is staffed 7 days a week. As the COVID-19 infection rate rapidly increased, hospitals began to implement postponement and cancellation of scheduled elective, non-urgent, non-emergent surgery.⁸ Many procedures that commonly employ RAAPM services, including joint replacement, fall into the category



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of scheduled elective,⁹ and this has led to a decline in acute pain service work. However, we have continued to schedule the RAAPM anesthesiologist daily in order to maintain high-quality acute pain medicine for the patients who continue to undergo surgery, assist anesthesiologist colleagues in the operating room by performing regional anesthesia techniques that avoid general anesthesia, and share the additional new burden of our COVID-19 airway response team. As RAAPM specialists, we are accustomed to rounding on patients in the ICU and hospital wards. We regularly interact with physicians from other specialties, nurses, pharmacists, supply chain services, and other hospital departments. These relationships and “soft skills”¹⁰ are ingrained in successful RAAPM programs¹¹ and have been applied daily in our departments’ continually evolving response to COVID-19 at the health system level.

In other aspects of our practices, major changes have occurred. With drastic reductions in clinic and other face-to-face care, we have now converted the majority of preoperative assessment to some form of telemedicine. Although this is more convenient (and safer in this era of COVID-19) for many patients, we will require careful evaluation to make sure we are seeing those patients who gain benefit from attending an in-person assessment in the future. Many of our RAAPM patients are managed at home with ambulatory perineural catheters and have been receiving daily follow-up through telemedicine,¹² so RAAPM clinicians have some familiarity with this form of healthcare delivery. The function of inpatient acute pain services has been largely unaffected other than consult volume, but facilitating earlier discharge and use of remote monitoring have been emphasized as priorities and may continue to gain traction in the future.

In the near future, we will begin the process of planning the return to “normal” operating room function including scheduled elective surgery¹³ although the definition of “normal” post-COVID will likely be different than what we were used to. Our healthcare systems have built up a backlog of surgical patients, and we will need to leverage some of the telemedicine lessons we have learned through COVID-19 to adequately see the large numbers of patients with surgical and other painful conditions who have been anxiously waiting at home for treatment. Managing this increase in care will depend on innovation as we enter this “brave new world” with the risk of future pandemics very likely. All of these innovations will require close study to examine risks and benefits, and ASRA will be a vital organization to facilitate innovation, test hypotheses and disseminate best practices nationally and internationally.

Teaching, learning, and continuing professional development have all been transformed due to COVID-19. We’ve personally witnessed the power of remote connections and rapid conversion of live meetings to virtual. At this time of year, we would typically be sharing new science and celebrating the achievements in RAAPM with each other at the much-anticipated annual ASRA spring meeting. While we understand the necessity to cancel this meeting due to COVID-19, we are also disappointed and miss the opportunity to see our friends and colleagues. We wish to express our sincere gratitude to the organizers from ASRA, including Dr. Jaime Baratta and her colleagues on the planning committee, who have put in so much work for what was to be an amazing meeting. COVID-19 has forced us all to reconsider how we should best disseminate education and science in regional anesthesia and pain medicine to ASRA members. Recent innovations from ASRA included hosting virtual poster sessions on social media that generated >2 million impressions.¹⁴ The ASRA fall pain

medicine meeting is already planned with multiple contingencies in place, and there may be opportunities to incorporate RAAPM educational components into the program. Of course, there is still a great deal of uncertainty, and so much depends on our success with eradicating COVID-19 across the globe.

An important realization is that RAAPM the subspecialty and Regional Anesthesia and Pain Medicine the journal both remain as relevant, if not more relevant, than ever. ASRA has more members than ever: physicians, educators, scientists, and other healthcare professionals committed in so many ways to the mission of providing the best care to our patients through regional anesthesia and pain medicine. RAAPM specialists from around the world have taken to social media to share up-to-date knowledge, practice recommendations, and emotional support using various platforms.¹⁴ We have seen and participated in webinars, moderated Twitter chats, professional forums, livestreaming events, podcasts, and other forms of social media engagement through posts, replies, and comments.

Albert Einstein is quoted as saying, “In the midst of every crisis, lies great opportunity.” The crisis of COVID-19 has and will continue to bring further opportunities to demonstrate the outcome benefits of regional anesthesia, the critical role of anesthesiologists across the spectrum of patient care, and the leadership potential of anesthesiologists locally, nationally, and globally. ASRA has always been full of incredibly creative and supportive people and the last few weeks have seen members stepping forward with innovative ideas to support the Society and each other. Although the COVID-19 pandemic has changed all of our lives in immeasurable ways, surgery will still cause pain, our future patients will still need regional anesthesia and analgesia, and the world will always need us to fulfill our calling and be at our best.

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REFERENCES

- 1 Zweig D. *Invisibles: the power of anonymous work in an age of relentless self-promotion*. London, United Kingdom: Portolio—Penguin Group USA, 2014.
- 2 Robb A. Traits of people who make the world work, *The New Republic*, 2014. Available: <https://newrepublic.com/article/117955/invisibles-david-zweig-power-anonymous-work>
- 3 Felsenthal E. Front line workers tell their own stories in the new issue of TIME, TIME, 2020. Available: <https://time.com/collection/coronavirus-heroes/5816805/coronavirus-front-line-workers-issue/>
- 4 Farmer B. At least 9,000 U.S. health care workers sickened with COVID-19, CDC data shows, NPR, 2020. Available: <https://www.npr.org/sections/health-shots/2020/04/15/>

- 834920016/at-least-9-000-u-s-health-care-workers-sickened-with-covid-19-cdc-data-shows
- 5 Specktor B. Coronavirus: What is 'flattening the curve,' and will it work?, Live Science, 2020. Available: <https://www.livescience.com/coronavirus-flatten-the-curve.html>
- 6 Uppal V, Sondekoppam RV, Lobo CA, *et al.* Practice recommendations on neuraxial anesthesia and peripheral nerve blocks during the COVID-19 pandemic: a joint statement by the American Society of Regional Anesthesia and Pain Medicine (ASRA) and European Society of Regional Anesthesia and Pain Therapy (ESRA), 2020. Available: <https://www.asra.com/page/2905/practice-recommendations-on-neuraxial-anesthesia-and-peripheral-nerve-blocks-dur>
- 7 Walters TL, Howard SK, Kou A, *et al.* Design and implementation of a perioperative surgical home at a Veterans Affairs Hospital. *Semin Cardiothorac Vasc Anesth* 2016;20:133–40.
- 8 Joint Statement Recommending a Surgical Review Committee for COVID-19-Related Surgical Triage Decision Making, American Society of Anesthesiologists Newsroom, 2020. Available: <https://www.asahq.org/about-asahq/newsroom/news-releases/2020/03/joint-statement-recommending-a-surgical-review-committee-for-covid-19-related-surgical-triage-decision-making>
- 9 Guy DK, Bosco JA, Savoie FH. AAOS Guidelines for Elective Surgery During the COVID-19 Pandemic, American Academy of Orthopaedic Surgeons COVID-19: Information for Our Members, 2020. Available: <https://www.aaos.org/about/covid-19-information-for-our-members/aaos-guidelines-for-elective-surgery/>
- 10 Ahktar A, Hroncich C. 20 soft skills every leader needs to be successful, Business Insider, 2020. Available: <https://www.businessinsider.com/soft-skills-leaders-need-for-success-2016-4>
- 11 Mariano ER. Making it work: setting up a regional anesthesia program that provides value. *Anesthesiol Clin* 2008;26:681–92.
- 12 King R, Mariano ER, Yajnik M, *et al.* Outcomes of ambulatory upper extremity surgery patients discharged home with perineural catheters from a Veterans Health Administration Medical Center. *Pain Med* 2019;20:2256–62.
- 13 Joint Statement. Roadmap for resuming elective surgery after COVID-19 pandemic, American Society of Anesthesiologists Newsroom, 2020. Available: <https://www.asahq.org/about-asahq/newsroom/news-releases/2020/04/joint-statement-on-elective-surgery-after-covid-19-pandemic>
- 14 Schwenk ES, Chu LF, Gupta RK, *et al.* How social media is changing the practice of regional anesthesiology. *Curr Anesthesiol Rep* 2017;7:238–45.