SOCIETY OF CRITICAL CARE ANESTHESIOLOGISTS
SOCCA

INTERCHANGE

Society of Critical Care Anesthesiologists Newsletter Volume 31 | Issue 2 | July 2020

SPECIAL COVID-19 EDITION

President's Message

THE SHOW MUST GO ON

Miguel Cobas, MD, FCCM

President, SOCCA
University of Miami
Miller School of Medicine
Miami, Florida

A few months ago – what seems like a century – I daydreamed about all the good news that would come from our Annual Meeting in San Francisco. I was confident I'd be writing about how the meeting was a phenomenal success and how well SOCCA was positioned for the future.

Then, with the pandemic, everything changed. SOCCA, like practically everything around us, had to adapt to what we are all calling the new normal, which may not be new for long but rather the way things are going to be for the foreseeable future.

First, some present context: as a result of strategic initiatives and operational efficiencies established through our partnership with IARS and the engagement of our members, we are confronting this crisis from our strongest standing in more than a decade. The enthusiasm of our membership is at an all-time high, as demonstrated by their interest and participation in multiple initiatives and committees. As an example, we had received (and accepted) a record number of abstracts and case reports for our meeting in San Francisco.

The Annual Meeting has been, traditionally, our principal educational and networking offering, and perhaps the main reason for joining the Society. Therefore, our mission to foster the knowledge and practice of critical care medicine by anesthesiologists through education, research, and advocacy must continue in a different format.

To that end, I would like to share our short and medium range initiatives:

1. The 2020 Annual Meeting lectures are being repackaged, updated, and combined with trending topics and will be available as online modules. These webinars will offer CME credits and will be available on demand after their initial streaming with live Q&A by the panelists. Our first webinar will be announced soon, and I assure you that the invited faculty are stellar. You won't want to miss it!
2. The Board Review course, which was to be offered for the first time the day prior to the Annual Meeting, will be presented online in several installments and remain available thereafter on demand. A benefit to this strategy is course availability closer to the Critical Care Board Exam, planned for October.
3. We will be adding frequent articles and video presentations from previous annual meetings, as well as relevant publications from our field, also with CME credit. While everyone is interested in the latest

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Click here to view or print the SOCCA INTERCHANGE newsletter.

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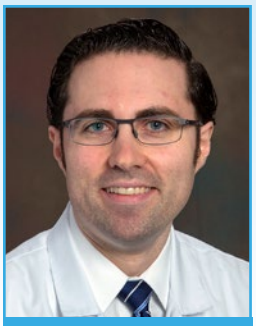


Craig S. Jabaley, MD
Communications Committee Chair
Interchange Editor
Emory University
Atlanta, Georgia

Perhaps unsurprisingly, this issue of Interchange is devoted to COVID-19. As a professional society comprised of critical care anesthesiologists, SOCCA members have responded in numerous ways to the unfolding pandemic: clinical care at the bedside, reconfiguring perioperative spaces, leading surge responses at all levels, developing clinical and operational guidance at the national level, and remaining at the forefront of investigative efforts. In the meantime, the critical care fellowship match cycle has drawn to a close, and those of us in academic settings are both celebrating our departing trainees while preparing for the influx of new faces.

Accordingly, features in this issue include epidemiologic insights into the future of the pandemic, practical tips for those of us doing unexpected telework, a summary of the American Board of Anesthesiology's response, and spotlighting a few of the myriad accomplishments of SOCCA members. We hope to continue featuring content that expounds upon the aforementioned themes over the coming weeks to months.

The SOCCA Communications Committee, which collaborates with member contributors to draft Interchange, remains committed to ensuring that SOCCA delivers valuable, relevant, and timely content to the membership. In pursuit of those goals, our workflow for releasing member-generated and other SOCCA-specific content is changing. More frequent and more regular content will appear on the SOCCA website's Interchange blog with promotion via social media outlets and then quarterly aggregation into our traditional newsletter format. As always, please do reach out if you would like to contribute!

President's Message *continued from the cover*

and most effective way to fight COVID-19, there's significant coronavirus fatigue, and we feel there's ample opportunity to highlight relevant publications in other areas.

4. We would like to increase representation of our younger generation of intensivists, as well as those colleagues in private practice, and plan to do so by organizing the subcommittees of Young Intensivists and Private Practice, with a special emphasis on networking, transition to practice, strategies for publication, and other practical topics.

We should recognize the work that our Board and committees (Education, Membership, Communications and Research) have continued to perform during this time. Volunteerism is very high, and each committee has increased its roster in order to perform their activities. The roster of each committee is being updated and will be published soon.

The Society continues its strong partnership with IARS, and the COVID-19 pandemic has afforded opportunities for the dissemination of ideas and rich discussions. If you haven't done so, visit Docmatter www.docmatter.com where you'll find answers to many of your questions and questions that you didn't know you had. We also continue to partner with the Anesthesia Toolbox project, another excellent opportunity in which fellows and young graduates can participate.

Our Society is only as strong as the members who constitute it, and I will ask for your help, collaboration, and ideas to continue making SOCCA the Society we envision. We want our membership to be engaged and energetic. Please go to socca.org/get-involved or contact our association manager, Vivian Abalama (vabalama@iars.org), with suggestions and content that you would like to see as part of our offerings.

Come to think of it, perhaps what I daydreamed months ago is no longer a dream, it's a reality (albeit in a slightly different form): SOCCA is as strong as ever, and its future is bright… wearing a mask for the time being.

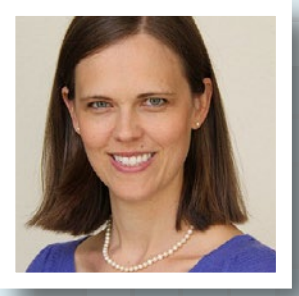
Warm wishes,
Miguel Cobas

SOCCA WEBINAR SERIES PRESENTS:

COVID-19: More Than Just a Respiratory Critical Illness

Thursday, July 23rd | 6:00 pm – 7:00 pm EST

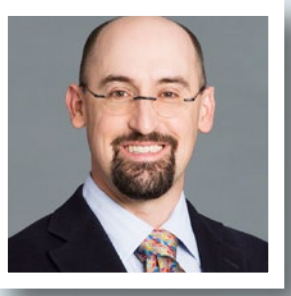
We've put together a panel of speakers working on the frontlines of the COVID-19 crisis. Join us to hear from three experts leading the COVID-19 response and stay for a Q&A session where you can interact with our panelists.



COVID RELATED HYPERCOAGULABILITY

Cheryl L. Maier, MD, PhD

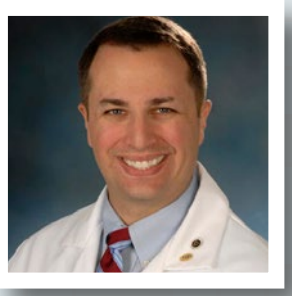
Assistant Professor, Coagulation and Transfusion Medicine
Emory University School of Medicine
Medical Director, Emory Special Coagulation Laboratory
Center for Transfusion and Cellular Therapies
Department of Pathology and Laboratory Medicine



HOLDING THE LINE: FEAR AND LOATHING IN THE TIME OF COVID

Mark E. Nunnally, MD, FCCM

Professor, Departments of Anesthesiology, Perioperative Care and Pain Medicine; Medicine; Surgery; and Neurology
NYU School of Medicine
Director, Adult Critical Care Services



ECMO, ORGAN SYSTEM FAILURE IN COVID-19

Samuel M. Galvagno Jr., D.O., Ph.D., M.S., F.C.C.M.

Professor, R Adams Cowley Shock Trauma Center
University of Maryland School of Medicine
Medical Director, Multi Trauma Critical Care Unit
Deputy Director, Shock Trauma Go-Team
Department of Anesthesiology
Program in Trauma
Operations Section Chief
COVID-19 Response Hospital Incident Command System

After registering, you will receive a confirmation email containing information about joining the webinar. Can't attend at this time? We will post the recording of this cutting-edge session on SOCCA.org for SOCCA members.

SOCCA eLearning

REGISTRATION IS FREE

SCAN ME

COMMITTEE REPORT

Research Committee Update

The SOCCA Research Committee met in-person during the February 2020 SCCM Congress in Orlando. We arrived upon several goals further outlined below. While progress has been slower than planned for obvious reasons, we remain committed to gradually ramping up over the coming weeks.

Robert D. Stevens, MD, FCCM
Johns Hopkins University
Baltimore, Maryland

The committee has long envisioned establishing a SOCCA Research Network: a multicenter research consortium dedicated to collaborative research in intensive care medicine. The primary focus would be on clinical research in the perioperative intensive care medicine domain (i.e., at the interface of surgery, anesthesiology, and critical care). The network would thus be highly interdisciplinary and inclusive. While clinical observational studies and clinical trials would be a natural fit, the network could also be leveraged for other types of research in the basic, translational, quality/safety, and educational spaces. The initial steps are to recruit a community of engaged SOCCA members, develop tools for multi-site data collection (e.g., REDCap, single IRB), establish a system of governance and oversight, and establish rules for data sharing. The medium- and longer-term goals are to position the network so that it can serve as an engine for highly competitive grant proposals to the NIH and other funding bodies.

The Research Committee would also like to facilitate the planning and writing of white papers on relevant topics in perioperative intensive care. The methodology of these might include deliberations of consensus conferences, clinical guidelines, and research agendas. Our plan is to engage with Research Committee members and, more broadly, SOCCA members on topics that would be appropriate.

Looking ahead, the Research Committee is engaged in supporting the Education Committee in planning the SOCCA Annual Meeting and other educational content. This fits within a broader strategic interest for SOCCA committees to align and integrate their efforts. This was discussed on a conference call between Chairs of the Research, Education, and Communications committees, as well as with Dr. Ashish Khanna, who is leading organization of the 2021 Annual Meeting. There is certainly a need for clinically focused educational material, as that is what the SOCCA members want and expect. The Research Committee could propose content concerning both methodology and original research. It could also help with vetting of meeting abstracts and selecting research award winners. Our plan moving forward is for the Research Committee, Education Committee, and Dr. Khanna to work together in planning further for 2021.

COVID-19

ABA's Response to COVID-19

THE AMERICAN BOARD OF ANESTHESIOLOGY
Advancing the Highest Standards of the Practice of Anesthesiology

Given the extraordinary disruption to training and medical practice caused by COVID-19, the American Board of Anesthesiology (ABA) has taken swift action to relax policies, offering increased flexibility for anesthesiologists. The Board has also worked to provide seamless access to educational and mental health resources for impacted physicians.

We recognize that our residents, fellows and diplomates are managing through an unprecedented event with many on the front lines of COVID-19 care. The Board of Directors has tried to assure them that we will do what we can to ensure that our requirements do not adversely affect them during this pandemic.

David O. Warner, MD
Secretary, American Board of Anesthesiology

To demonstrate this support, the Board has addressed a range of questions we have heard from residents and fellows concerned about reduced training hours and forthcoming exams. To allay their concerns, the Board announced in March that mandatory quarantines instituted by programs and healthcare systems would be counted toward clinical hours as trainees could continue studying during quarantine to meet training requirements for exam eligibility. We also offered fellowship programs the flexibility to choose between multiple dates to administer the In-Training Examinations in Critical Care Medicine and Pain Medicine.

Finally, we have waived all exam cancellation, change and late fees, and extended the eligibility for certification by one year for anesthesiologists seeking initial certification. This may be particularly helpful this year as we have had to cancel several APPLIED Examinations, the final step in the initial certification process. We are continuing to work on developing creative contingency plans to get candidates through the exam system as quickly as we can do so safely.

Meanwhile, we have also tried to tackle concerns among diplomates about completing Maintenance of Certification in Anesthesiology® (MOCA®) requirements during the pandemic. The Board has waived all continuing certification requirements for the remainder of 2020. However, our MOCA Minute Committee has developed a series of COVID-19-related MOCA Minute® questions designed to share new knowledge that may be used to safely manage infected patients during the pandemic. Given the evolving nature of the virus and its impact on clinical practice, all diplomates receive COVID-19 questions regardless of their practice profile.

Additionally, we have developed a COVID-19 news and updates website to house all related ABA announcements in one location for diplomates, residents, and fellows. The site also includes pages of helpful COVID-19-related clinical, medical education and mental health resources for physicians managing through the pandemic.

We appreciate the tremendous impact that the pandemic has had on the lives of anesthesiologists and their practice, and are doing what we can to provide value to them during this difficult time. Our diplomates, fellows and residents have our full support.

The New York City Experience

Natalia Ivascu, MD (Weill Cornell Medicine) and Jonathan Hastie, MD (Columbia University Vagelos College of Physicians and Surgeons) are critical care and adult cardiothoracic anesthesiologists in New York City.

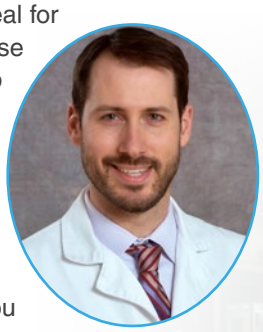
Their leadership of a coordinated COVID-19 pandemic response across the New York-Presbyterian health care system was recently featured in NEJM Catalyst.

Brent Kidd, MD
Assistant Professor of Anesthesiology
University of Kansas Medical Center
Kansas City, Kansas

Brent Kidd: How early in the crisis did your groups begin preparing for an influx of patients? What were those early days in March like?

Natalia Ivascu: I wish we would have been planning earlier. I was actually in Raleigh for oral boards in early March when news began to reach us about institutional travel bans and worsening COVID patient volumes. A lot of discussions began to happen very quickly regarding how we would handle the influx of patients and expand our ICU capabilities leading up to March 16, which is when the mayor issued an executive order suspending elective surgical procedures.

Jonathan Hastie: There was an element of fear that was real to everyone involved early on. It was real for us as leaders of our respective groups, and it was real for those at the bedside taking care of these very sick patients. We would open up a brand new unit, and it would be completely full of patients in a single day who would all be intubated. We had several colleagues become sick, some of which required intubation themselves. It is a powerful moment when you take care of someone you work with.



Natalia Ivascu: This interview may turn into a therapy session for Jonathan and myself as we reminisce about these events. I remember taking calls from the transfer center and getting call after call in a single day, often with young patients in their 30's or 40's who were extremely ill. There was a mental exhaustion component obviously, in addition to the emotions, as you came to realize your own vulnerability.

Brent Kidd: How did you go about staffing those newly created ICUs? Did you face difficulty engaging providers who may not normally practice in a critical care setting?

Jonathan Hastie: We had a lot of great coordination across specialties and divisions that may not normally work together. For staffing, we utilized an "ICU Pyramid" model where an intensivist was elevated to a consultant role supervising two or more units, and a critical care capable attending filled the traditional role of "ICU Lead" for each individual unit. We operated under the mindset that people who volunteered for a position are generally going to be more engaged and do a better job than those simply assigned. Thankfully, there were a lot of volunteers across specialties, and that decreased our need to go out and find people to staff these units.

Natalia Ivascu: With the cancellation of elective procedures we had a large workforce ready and available to help. We created specific teams to help our system as a whole face the pandemic. A few examples of those include a simulation team focused on PPE donning/doffing, airway teams, line teams, and proning teams. We even formed a family liaison team, which included providers who may not be able to be on the front lines of patient care but could help relay information regarding patient care plans and answer questions for loved ones. These accessory teams helped augment the traditional ICU team and allowed them to focus on the patient care as much as possible. When you have a lot of uncertainty, like we all did early in the pandemic, giving people a well-defined job in which they feel confident allowed us to utilize our available human resources effectively.

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Brent Kidd: Nontraditional spaces for ICU overflow, such as operating rooms, were either implemented or planned across the country. What was your experience providing critical care services to patients in these spaces?

Jonathan Hastie: It was a surreal experience to go past an operating room that you know and have worked in for years, and yet now see that it contains three to four ICU patients on anesthesia machines. With the space limitations, drug shortages, and dialysis machine shortage, there was a sense of moral distress in that we were not providing ICU care as we usually did. But I used to tell other staff that lives are saved on the margin, and these patients who would have had nowhere else to go were alive and being cared for. The traditional ICUs obviously did great work throughout the crisis, but it was the nontraditional spaces that really made the difference in how we addressed the sheer volume of patients that needed care at that time.

Natalia Ivascu: First of all, I want to mention how incredibly proud I am about the work that everyone did taking care of these patients. I am grateful that so many people from different departments and divisions worked together in areas they may not have been comfortable in to help these patients. I remember when we first opened the OR-ICUs, which were being staffed by a lot of perioperative nurses and physicians, people were initially unsure about their ability to care for these patients. You came to realize, though, that we were all they had. It became important to find some forgiveness for yourself and for others, because everyone there was giving everything they had at all times just to keep up with the number of patients. Every bit of care we were able to provide in those spaces was more than the patients would have otherwise had access to.

Brent Kidd: What unique skills do you think critical care trained anesthesiologists bring to the fight against COVID-19, and what do you think their role will be in the era of healthcare to come?

Jonathan Hastie: I think you can define anesthesiologists as systems thinkers. We are routinely focused on the management of patient flow, efficiency, and resource utilization in the operating room, and I think those skills translated well to the needs of a pandemic. I can think of several real world examples of that in the triage skills needed to handle the volume of patients we were dealing with, in the interplay between critical care anesthesiology/medicine/surgery when managing these novel ICUs, or more practically in the management of critically ill patients on an anesthesia machine.

Natalia Ivascu: Anesthesiology training teaches flexibility, teamwork, and adaptability. We bring all of those skills to our critical care practice, and they were extremely important during the surge and in unusual environments, like the OR-ICU. Going forward, it is clear that we need to maintain preparedness for circumstances like we experienced. I believe anesthesiologist-intensivists are key to maintaining institutional flexibility to rapidly increase critical care physician coverage. Unlike our other critical care colleagues, anesthesiologists do not need to maintain outpatient practices and have an abundance of other clinical opportunities outside of their ICU duties. I believe expanding the volume of anesthesiologist-intensivists will likely prove to be a key mechanism, and an economical strategy, for hospitals to maintain a robust and available pool of intensivists for pandemic or other high-volume clinical surge situations.

COVID-19

Effective Data Handling To Improve Patient Outcomes

Dr. Piyush Mathur is the founder of BrainX, a collaborative platform for physician researchers and innovators that has come together to create the next generation of data handling and AI applications for healthcare. Dr. Ashish Khanna is the founding partner of BrainX. (More information at: www.Brainxai.com.)

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INTRODUCTION

Among its many impacts, COVID-19 has spawned a plethora of early data and literature. That which is not high-quality may hinder progress toward our understanding of the disease. Critical care and, more broadly, perioperative medicine are clinical arenas that generate massive volumes of data. As we routinely care for patients with COVID-19 in those settings, these data hold promise to further our understanding of the disease.

CRITICAL CARE DATA – WHERE ARE WE TODAY?

A PubMed search at the time of writing for "COVID-19" yielded more than 16,000 results, of which nearly 14,000 have been published since April 1, 2020. Although some randomized controlled trials (RCTs) exist, nearly all these publications are observational.

The combination of proliferative observational findings, amplification via social media, and pressure to urgently conceptualize optimal treatment modalities can promote the well-intentioned but unfortunate spread of misinformation and even disinformation.5 Clinical adoption of treatments despite lack of RCT evidence can lead directly to patient harm. Many proposed therapeutics have significant adverse effects, which can be particularly detrimental to patients at baseline risk of morbidity and mortality from COVID-19 (i.e., the elderly and those with cardiac comorbidities).6 Unnecessary use of these drugs may also create downstream problems, such as shortages for approved indications (e.g., hydroxychloroquine for lupus).

RCTs, while challenging to design and implement, are a robust and effective tool for discerning between harmful and beneficial therapies. In contrast, a recent non-randomized clinical trial observed decreased SARS-CoV-2 viral load in patients treated with hydroxychloroquine after excluding six patients from the treatment group.7 If these six patients had been included, the treatment group would have demonstrated greater harm than benefit, as the number needed to harm with hydroxychloroquine would have been six instead of zero (19.2% in hydroxychloroquine vs 0% control).

In the context of a novel pandemic disease, the time lag associated with RCTs – stemming from institutional review board approval, study design, funding, enrollment, time needed to treat, analysis, etc. – requires alternative research approaches that still generate reliable findings from observational data. One such approach is data registry analysis, as was undertaken by Mehra et al. Using a registry of over 96,000 hospitalized patients, the authors were able to show that hydroxychloroquine was associated with no benefit, more ventricular arrhythmias, and an increased risk of in-hospital death.8 However, the validity of the underlying data and methodology have subsequently been called into question, which led to a high profile retraction. This example highlights the importance of registry data quality. While awaiting RCTs, increasing the availability of authentic, clean, and large datasets may be the key to rapidly increasing scientific understanding of the disease and its treatments.

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THE EVOLUTION OF COVID-19 REGISTRY DATA

With the explosion of both raw and processed COVID-19 data, there is a commensurate need for systems to facilitate entry, storage, access, and processing of this information. In turn, accurate and reliable data can be used for research, operations, and predictive modeling of important patient-centric outcomes. Well-established large critical care datasets (e.g., MIMIC-III), while valuable, cannot immediately meet COVID-19 operations and research needs. Furthermore, public and commercial critical care datasets are not updated in real time.

The Viral Infection and Respiratory Illness Universal Study: COVID-19 (VIRUS) Registry is a collaborative effort intended to meet these needs.9 Investigators at the Mayo Clinic and Boston University, in partnership with the SCCM Discovery Research Network, have aimed to create a registry of all eligible adult and pediatric patients hospitalized with suspected or confirmed COVID-19. These data will support the conduct of a cross-sectional, observational study. Another tangible aim for this work is near-real-time observational comparative effectiveness analysis to determine effective treatment strategies and/or provide meaningful hypotheses for future clinical trials. At the time of writing, the VIRUS Registry contains data from over 6,000 patients contributed by more than 500 collaborators. A data dashboard is available online: sccmcovid19.org.

The Extracorporeal Life Support Organization (ELSO) has long maintained an international registry of patients who receive extracorporeal membrane oxygenation (ECMO) modalities. While ECMO is not new to critical care medicine, the use of an expensive and limited resource in a clinical situation as complicated as COVID-19 demands a deeper understanding of disease-specific outcomes. As such, ELSO created an ECMO registry specific to COVID-19 and is updated in real-time for analytics and outcome modeling. At the time of writing, data from about 1,100 patients with COVID-19 who received ECMO demonstrated a 53% survival to discharge rate. A data dashboard is available online.

DATA OVERLOAD IN THE PANDEMIC — WILL ARTIFICIAL INTELLIGENCE HELP?

Major challenges with COVID-19 data include accuracy in reporting, missing data, and timeliness of availability, even in some of the commonly used public datasets. Access to clinical datasets remains challenging despite calls to improve accessibility.[1]

As previously stated, there has been an exponential rise in potentially relevant pre-print and peer reviewed literature. For example, the recently released COVID-19 Open Research Dataset (CORD-19) includes over 24,000 research papers from peer-reviewed journals and pre-print servers (e.g., bioRxiv and medRxiv). The need of the hour is to convert some or all of these findings to information that is meaningful. To that end, natural language processing techniques have been developed and employed.[2]

Multiple models have been created to predict the spread of the disease and its associated outcomes, such as hospital resource utilization and death. It has been challenging to build models for prediction of mortality with ever-evolving data and sometimes incomplete datasets.[3] Beyond predicting death, explainable machine learning models that describe key features, with relative ratios of importance of these features, are important for making policies to contain the spread and improve outcomes.[4] Machine learning models, which have the ability to adjust to constantly-evolving data, can support rapid cycle improvement needs, be implemented universally, and scaled for every region. This includes high-demand areas, such as intensive care units.

LESSONS LEARNED

Lessons from COVID-19 overlap with those learned from prior experience with big data: we need clean, high-quality, guideline-based, regularly updated, dynamic datasets that are readily and freely accessible. We can then use machine learning and natural language processing tools to leverage and translate data into meaningful information. Needless to say, teamwork is the essence of the practice of critical care medicine. Data handling during and after the pandemic will also need the same level of collaboration between data scientists and clinicians through open platforms to get the best desired outcomes and truly help our patients.

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REFERENCES:

1. Cosgriff CV, Ebner DK, Celi LA: Data sharing in the era of COVID-19. Lancet Digit Health 2020; 2: e224
2. Awasthi R, Pal R, Singh P, Nagori A, Reddy S, Gulati A, Kumaraguru P, Sethi T: CovidNLP: A Web Application for Distilling Systemic Implications of COVID-19 Pandemic with Natural Language Processing. medRxiv 2020: 2020.04.25.20079129
3. Jewell NP, Lewnard JA, Jewell BL: Caution Warranted: Using the Institute for Health Metrics and Evaluation Model for Predicting the Course of the COVID-19 Pandemic. Ann Intern Med 2020
4. Mathur P, Sethi T, Mathur A, Khanna AK, Maheshwari K, Cywinski JB, Dua S, Papay F: Explainable machine learning models to understand determinants of COVID-19 mortality in the United States. medRxiv 2020: 2020.05.23.20110189
5. Ingraham NE, Tignanelli CJ: Fact Versus Science Fiction: Fighting Coronavirus Disease 2019 Requires the Wisdom to Know the Difference. Crit Care Explor 2020; 2: e0108
6. Kalil AC: Treating COVID-19-Off-Label Drug Use, Compassionate Use, and Randomized Clinical Trials During Pandemics. JAMA 2020
7. Gautret P, Lagier JC, Parola P, Hoang VT, Meddeb L, Mailhe M, Doudier B, Courjon J, Giordanengo V, Vieira VE, Dupont HT, Honore S, Colson P, Chabriere E, La Scola B, Rolain JM, Brouqui P, Raoult D: Hydroxychloroquine and azithromycin as a treatment of COVID-19: results of an open-label non-randomized clinical trial. Int J Antimicrob Agents 2020: 105949
8. Mehra MR, Desai SS, Ruschitzka F, Patel AN: Hydroxychloroquine or chloroquine with or without a macrolide for treatment of COVID-19: a multinational registry analysis. Lancet 2020
9. Walkey AJ, Kumar VK, Harhay MO, Bolesta S, Bansal V, Gajic O, Kashyap R: The Viral Infection and Respiratory Illness Universal Study (VIRUS): An International Registry of Coronavirus 2019-Related Critical Illness. Crit Care Explor 2020; 2: e0113

Initiative for Multicenter Pragmatic Anesthesiology Clinical Trials (IMPACT) Award Recipient

Matthieu Legrand, MD, PhD

The choice of vasopressors for treating hypotension during General Anesthesia: A pilot pragmatic cluster cross-over randomized trial (the VEGA-1 trial)

Professor in Residence
Department of Anesthesia and Peri-operative Care
University of California, San Francisco

IMPACT is the result of a consortium of academic anesthesiology organizations who seek to stimulate pragmatic research in the U.S. The goal of IMPACT is to advance scientific knowledge in anesthesiology, and enhance care in perioperative medicine, critical care, pain management, and peri- and post-partum care. The IMPACT grant is designed to facilitate large pragmatic trials in an effort to answer important questions in anesthesiology-related research.

IARS Improving Health through Discovery and Education · AUA Association of University Anesthesiologists · Society of Critical Care Anesthesiologists SOCCA · eSAS · PACT · MPOG · FAER Foundation for Anesthesia Education and Research

COVID-19 Letters

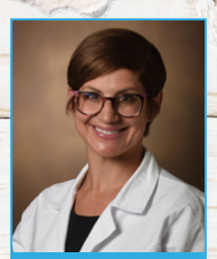
Well I guess we will start this one with the honest truth. I have been here for 3 days and am in an ICU of 78 beds. I have not heard of one successful extubation. Sure, is this biased information...you bet...but it's also astronomically different from every ICU I have ever been in. And I have been in quite a few. The disease process is so profoundly odd...it's so hard to explain. But the one thing that is the same on every single patient is that this is an absolutely brutal disease that defies all logic and unabashedly kills...albeit slowly.

So, what am I learning here? Part of the team that I described in my first email is the most essential part. This is the family support person. This is actually not ethics or the chaplains, but rather anesthesiologists who are over a certain age, immunocompromised, or pregnant. They Zoom or Facetime into rounds, and then they personally have conversations with the family members each day. They stay on for whole week so as to build a relationship with the families.

This is essential not only for the families but for the teams, as we simply cannot take this time like we usually do during our day.

Also today a resident called a family on speaker phone, because they wanted to talk to their family member but didn't want to see him. She held the phone for 20 minutes while they wailed, sobbed and talked to the patient. While 3 other patients were in the room and the patient was deeply sedated. The patient likely didn't hear them, but my resident did. She said it was the hardest part of today.

This is why you need time off. I am doing 7 days in a row right now because another attending had a death in their family (from COVID), but I can attest to you that if and when this hits you have to take care of your people. They have to work in shifts. They cannot maintain this level of intensity paired with the need for emotional detachment for too many days in a row.



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Editor's Note: Nicole King is an anesthesiologist and critical care physician at the University of Cincinnati. She is currently obtaining her Executive Masters in Clinical Quality, Patient Safety and Leadership at Georgetown University. She answered a call for volunteers in New York and staffed a repurposed operating room intensive care unit for a month. While there, she chronicled her experience via e-mail. Excerpts from those e-mails are reproduced below. Only minor edits have been made where necessary for readability and to guard privacy.

Imagine you are a cath lab nurse, and you have been asked to take care of 3 critically ill patients with a disease we know nothing about. Can you imagine? I can't, but I'm living it. I am surrounded by heroes. Nurses who are practicing so far outside their comfort zone it's insane. Trying to learn to chart, titrating drips, troubleshooting dialysis until perfusion can get there, silencing alarms (they never stop...ever...my ears are bleeding...I hear them in my sleep), trying to clean the patients, turn the patients, call out for the doctor because the patient is fighting the vent or tanking their blood pressure.

CRNAs being scheduled to cover an OR of patients as a provider (something they have never done...they have never rounded on a patient like we have) and then being asked to also be the nurse. Trying to do both until someone else shows up take over the "provider role" or now 2 CRNAs in one OR so that they can be both nurse and provider. Holding hands, cleaning faces, suctioning, turning, cleaning up all of the messes, redressing lines, titrating drips, charting nursing stuff while ordering stuff like a provider. Can you imagine?

Now imagine you are an attending and you are used to things just "happening" and expecting that the patient is cleaned, appropriately positioned and the charting is completely caught up. Now take all of that and throw it out the window.

Now imagine you are a critical care fellow and your job is to do oral care, suction ETTs, and try to manage the ventilators of 78 patients trying to die. That job that "nurses and RTs do" is now your job. One never realized how time consuming and essential this job is. One never realized how important it is. Good critical care is 10% about good decision making and 90% about Rockstar nursing care. I always knew my CC nurses could make or break me. They taught me how to be a doctor. But I never realized that without them, the mortality of a patient likely increases. By how much...I don't know. But it's true.

So train people now to be ICU nurses...all of you...all of us. We have to. If we don't, the patients will suffer.

This one is going to be a bit more for those who are exposed to ECMO on a regular basis, though I think it is a useful foundation for how we think of most things we take advantage of in an ICU setting.

Things change a lot when you move from a large "community hospital" as I would consider the Navy MTFs to larger academic institutions. One can volley back and forth on the pros and cons of both, but the fact remains that the one thing that stuck out to me as an ICU fellow, was that ECMO was always the answer in an academic institution.

ALWAYS...and even if was the least reasonable option, it was still on the table. It had to be...because the surgeons lived to cannulate, and you lived to manage that circuit. You could do anything with that circuit. Oxygenate blood, bypass a failing RV and LV, sometimes both, sometimes with multiple venous drainage limbs. I mean who could pass up a good VAV ECMO. It's LIFE... or at least it is for right now...we can do anything right?

Except when it is a pandemic. All of a sudden that option and/or that choice is far more exclusive. All of those "recommended" indications and contraindications become REAL and hard. Because for all the times you claimed that the surgeons would cannulate a frog if they needed to, you didn't realize you slowly started thinking it was a valid option and a normal part of ICU care...for just about anybody.

After all that time lamenting that ECMO was always the answer, I realize how privileged I had become.... because it was always available. And now, it is not.

Look around at what you have plenty of and what you don't, and think about how you will ration it. This will be easier for those who have been deployed and/or in the military and know this process well. This will be more difficult for those of you who have lived in academia for a long period of time. It may never come to this in your institutions, but the possibility is there...whether now or in the fall or in the future.

Stay safe out there...and remember ECMO is now NOT always the answer.

Today I didn't work. Today my work is done, and yet it's the first day I cried. Not sure why I was susceptible to it today of all days. Why now? Maybe it's the shield being lowered as I start thinking about going home and seeing my babies. Maybe it's anger...at the world. At some of my own circumstance. Or maybe it's the gravity of a situation I can't control, and I was shell shocked when one of my more stable patients died today.

Also yesterday, on my last day, I extubated my final patient and then spent hours trying to get him the hell out of that room. His two roommates were DNR but full care and actively dying, and there was so much activity, his heart rate kept raising higher and higher. He is so thankful, and he thought he was going to die, but he needs to go out of this room. I called bed management to try to force the system. I felt like if he stayed he would fail. He would get too anxious. I would have to sedate him, and I would fail him. After saving him, I would fail him. I couldn't live with that. He finally went to the floor last night. For that I am grateful.

In "my core," of which I covered 16 of the past 25 days, I took care of 17 different patients. 4 of 17 (24%) were extubated, 3 of 17 (13%) died, and 10 of 17 (60%) were still intubated or trached in the ICU.

And that is how I leave New York. Those stats are heart wrenching. That is miserable and devastating. And as I walked home last night, an ambulance pulled up and the EMTs jumped out pumping a man's chest rushing into the ER...and I thought...COVID.

And today after crying and collecting myself, I went and enjoyed the glory of central park along with 15,000 other New Yorkers. I watched them all wear masks and try to socially distance but just try to be a tiny bit normal. And I felt human again. Because I have to. Because we have to...because we have to live before we die. We have to be smart about it...but we have to live.

COVID-19

Ethical and Moral Principles During a Pandemic

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The COVID-19 pandemic has raised many ethical and moral dilemmas in the realm of public health, social order, duty of care, and fair distribution of resources. Difficult decisions must be made about how, where, when, and to whom resources should be allocated. Physicians and health care workers are bound by a duty of care, therefore, obligations to the patient's well-being are generally considered to be primary. This is grounded in the principle of beneficence, among others. There is also a reciprocal obligation placed on health systems to provide the best possible infection control modalities at the disposal of healthcare workers, to provide them preferential access to care should they become ill, and to consider the well-being of the families as critical to supporting healthcare workers. Appropriate remuneration and protection of healthcare workers from stigma and medico-legal liabilities are also regarded as important norms. In the absence of such reciprocal obligations being met, healthcare workers cannot legitimately be expected to assume a significant risk of harm to themselves and their families.

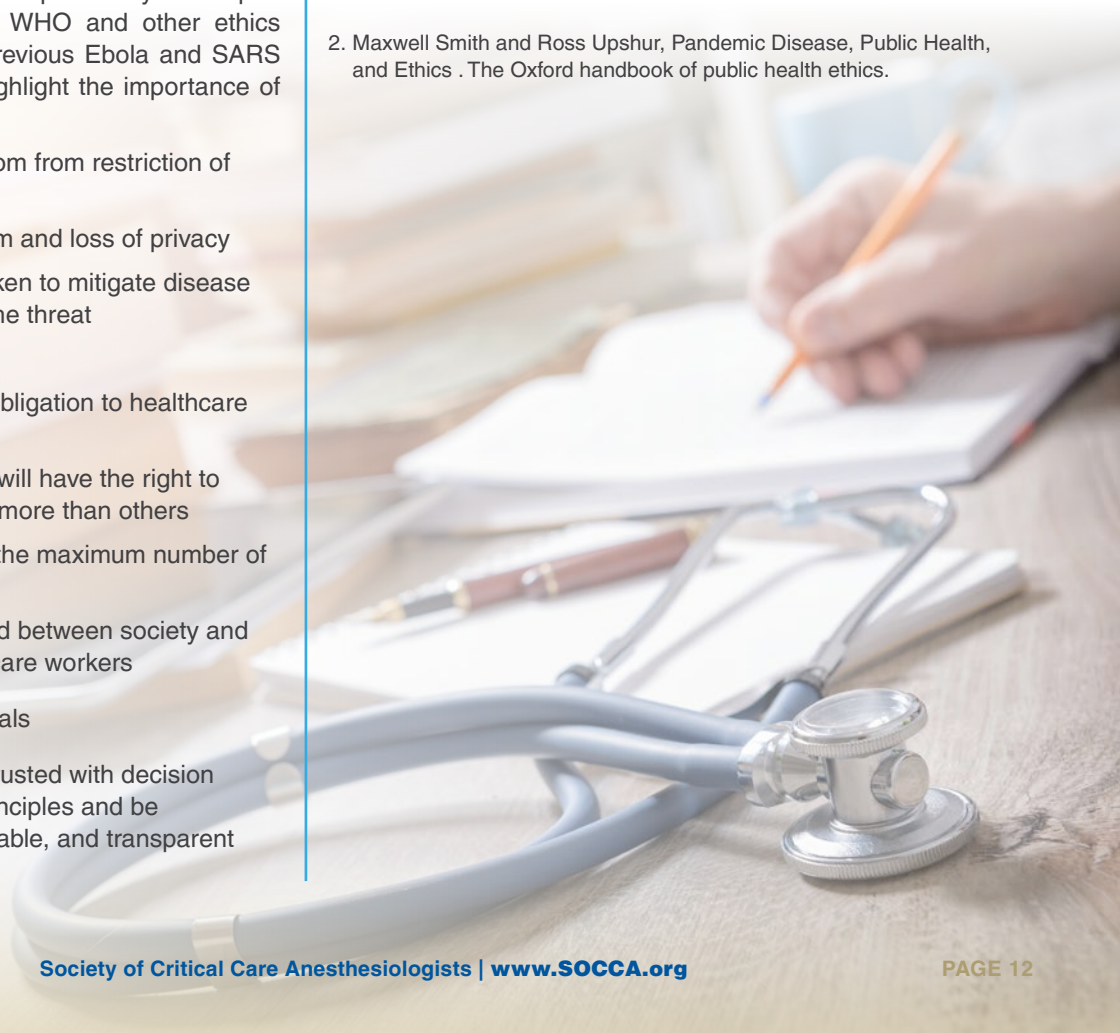
Several ethical frameworks have been previously developed for pandemic preparedness by the WHO and other ethics organizations, especially after the previous Ebola and SARS outbreaks across the world. They highlight the importance of many ethical values. These include:

1. Individual liberty, including freedom from restriction of movement
2. Protection of the public from harm and loss of privacy
3. Proportionality, wherein steps taken to mitigate disease spread must be proportional to the threat
4. Duty to provide care
5. Reciprocity, including societies' obligation to healthcare workers
6. Equity, and although all patients will have the right to receive care, some will be given more than others
7. Utility, or the maximum good for the maximum number of people
8. Trust, which is essential to uphold between society and policy makers, as well as healthcare workers
9. Solidarity to achieve common goals
10. Stewardship, whereby those entrusted with decision making must adhere to these principles and be reasonable, responsive, accountable, and transparent

In the months ahead, the application of these principles must be informed by evidence as much as possible. As the disease takes its toll on the population, including healthcare and other frontline workers, we need to balance these principles with our own safety. This is possible only if policy-makers and leaders act in a trustworthy manner by applying procedural principles fairly and consistently, being open to review based on new and relevant information, and acting with the genuine input of affected communities. In addition, a synchronized approach is essential to the success of any response effort. There will be, and already is, a devastating burden on the lives and psyches of the population and countless frontline workers. These individuals must be supported by society in the years to come for having forged ahead for the greater good and putting their own safety second to their sense of duty.

REFERENCES:

1. WHO Guidance for Managing Ethical Issues in Infectious Disease Outbreaks. 2016
2. Maxwell Smith and Ross Upshur, Pandemic Disease, Public Health, and Ethics . The Oxford handbook of public health ethics.



The Accidental Teleworker

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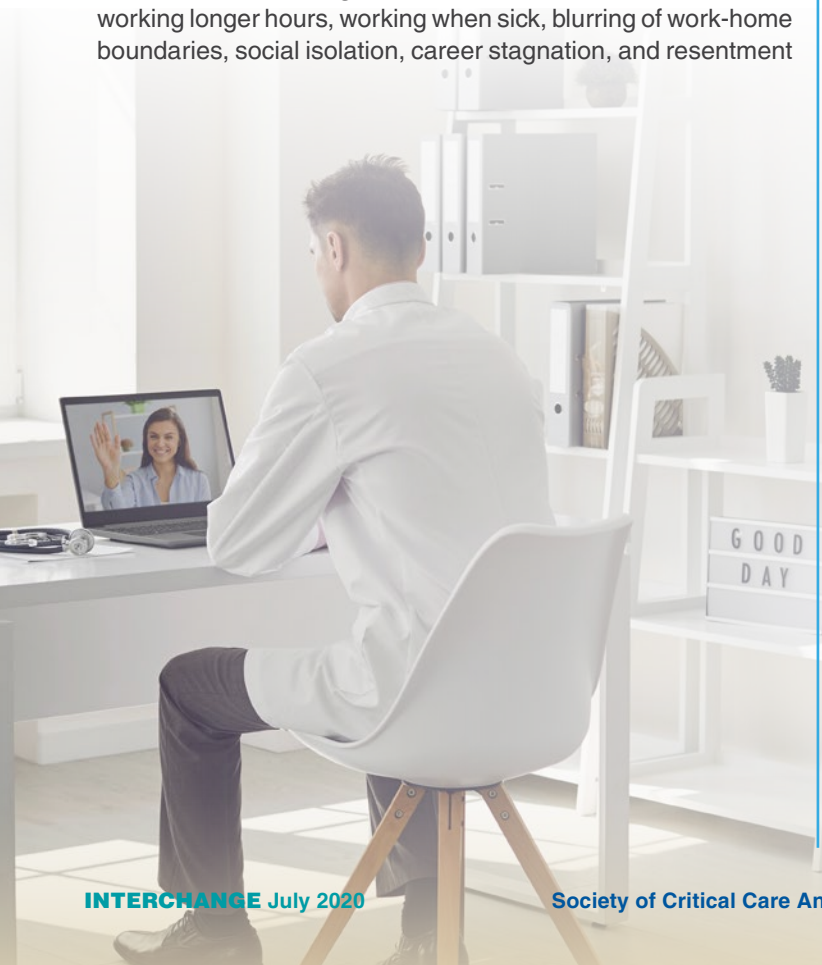
Telework, or telecommuting, is an alternative work arrangement where "employees perform tasks elsewhere that are normally done in a primary or central workplace".[1] According to the US Bureau of Labor Statistics, more than 25 million people were telecommuting in 2018, and the number of telecommuters increased 115% between 2005 and 2015.[2,3] Workplace social distancing, including telework, has been considered a possible mitigation strategy during influenza pandemics[4], and a number of companies and governments have encouraged workers to telecommute[5] because of the current COVID-19 pandemic. With the recent, sudden increase in telework during this time, it is worth briefly reviewing the advantages and disadvantages of telework, how teleworkers now may differ from those in the past, and how to make teleworking a more fulfilling experience.

Research examining telework has had conflicting results and been criticized for methodological weaknesses, such as small sample sizes, non-randomization, and self-selection of participants into telework.[1,6] However, studies generally suggest positive effects for teleworkers, including increased autonomy, schedule flexibility, improved home-work balance, increased productivity, and higher job satisfaction.[1,7] A number of disadvantages have been identified as well, such as working longer hours, working when sick, blurring of work-home boundaries, social isolation, career stagnation, and resentment from coworkers.[1,7] While some of telecommuting's touted advantages, such as increased autonomy and higher job satisfaction, seem fairly consistent across studies, others are less so. For example, are people really more productive, or do they just work longer hours[6]? Do shorter commutes and staying at home improve work-family balance, or is there a resultant blurring of work-home boundaries leading to increased family conflict and stress?

Notably, people telecommuting due to necessity for social distancing are a different population than those who previously telecommuted. Workers suddenly started teleworking, possibly involuntarily, without time to set up the physical workspace or time structure to do so. An employee and manager may not have had time to work out a telework agreement, which would delineate scheduled check-ins, expectations, and productivity measurements. Current teleworkers may not possess characteristics thought to be associated with better telecommuters, such as a high level of self-motivation, high level of job knowledge and skills, good time management and organizational skills, strong communication skills, and comfort with solitude.[7] Because of shelter-in-place orders and school closures, parents are contending both with markedly limited access to childcare and homeschooling while also expected to perform their regular job duties. Additionally, the feelings of solitude and stress due to social distancing and apprehension over the COVID-19 pandemic could be amplified by teleworking. All these factors can increase distractibility and decrease productivity, especially when starting a new and unusual work arrangement.

Although there are not yet evidence-based best habits, a myriad of generally congruent practical telework tips can help set up a better practice.



ESTABLISHING A WORKSPACE ENVIRONMENT

- **Set up a physical workspace in your home**. Ideally, this includes a dedicated area, ergonomically designed, separate from others in the household, and with adequate technological and internet capabilities.[8,9,10,11,12,13] If you have trouble concentrating because of noise around your home, for example kids playing, then noise cancelling headphones may help you focus.[8,10] Having a dedicated workspace helps set mental and physical work-home boundaries and may decrease work-family conflict that arises from telecommuting.

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- **Maintain patient confidentiality**. As medical providers, we must keep HIPPA compliance in mind when setting up a workspace. If you are performing telehealth visits from home, you should be in a space where patient confidentiality is maintained both in your physical space and through whatever media (e.g., telephone or video) you are using to perform your visit.
- **Set up adequate communication capabilities**. If using an internet platform for patient care, your internet capabilities should be robust enough to prevent interruptions that could disrupt visits or impact acute care decisions.

CREATE A WORK SCHEDULE AND ROUTINE

- **Build transitions into and out of work**. Consider getting dressed[9,12,13] every morning, just as you do when commuting to work. Set a routine to signal the end of the day,[12,13] such as putting away electronic devices.[8,9,10] Having these routines can both prepare your mind to work and also help it transition back to the home environment, strengthening work and home boundaries.
- **Maintain set work hours**,[8,10,11,12,13] **and schedule breaks**.[12] One disadvantage of telework is the propensity to work longer hours, which can result in overworking.

COMMUNICATE WITH COLLEAGUES

- **Socialize with colleagues**. Attend and actively participate in video meetings (9; 12) with your video camera on[8], and also talk to coworkers about their day or weekend like you would at the office[13] Social isolation is another disadvantage of teleworking[7], and this feeling may be amplified by current social distancing recommendations. Actively increasing face-to-face and social interactions, albeit through the internet, can lessen the feeling of solitude.
- **Overcommunicate**[10,12,13] **with coworkers and supervisors**. Career stagnation and coworker resentment have been listed as disadvantages to telework[7], possibly because of decreased face-to-face interactions with supervisors and coworkers. However, in the meta-analysis by Gajendran et al[1], telecommuting was associated with positive supervisor ratings, possibly because teleworkers knew that employee-supervisor relationships could suffer, so they strategically focused on developing these relationships.
- **Manage expectations around productivity**[9] **for yourself and your coworkers**. During this unprecedented time, it is important to set realistic expectations.

PEOPLE AT HOME

- **Set boundaries with people at home**[12,13] around your workspace and time to prevent blurring of work-home boundaries.
- **Create a daily schedule for kids**, stock up on books or puzzles, and plan virtual playdates[9]. School closures and unplanned home schooling has added an extra layer of difficulty for parents now working from home. Creating a daily schedule the night before can help integrate kids' and parents' schedules and manage expectations for both parties.

CARE FOR YOURSELF

- **Socialize**. Organize online social time with friends[9,13], or even set up a support group if you need one[10]. As stated previously, social isolation is a recognized disadvantage of teleworking and can further contribute to feelings of isolation.
- **Go outside if possible**.[10,12] Exercise and visually seeing other people, in a way that follows social distancing guidelines, can help alleviate feelings of isolation and depressed mood.
- **Take sick days**. Telecommuters are more likely to work when sick[7], another disadvantage of teleworking. Remember to take time to care for yourself when you need it, and allow yourself to rest and recover.

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- **Don't be too hard on yourself**. Bear in mind that many people are having a difficult time dealing with the pandemic, and teleworking in an effective way that doesn't intrude on family boundaries likely takes practice[1].

- **There are disadvantages to telecommuting**, but overall studies have suggested positive effects, such as increased autonomy and job satisfaction. Telework is being used as a method of workplace social distancing during the current COVID-19 pandemic. While it may be difficult to abruptly start teleworking, there are strategies that can increase a feeling of productivity and satisfaction, and decrease the sense of isolation.

REFERENCES

1. The Good, the Bad, and the Unknown About Telecommuting: Meta-Analysis of Psychological Mediators and Individual Consequences. Gajendran RS, Harrison DA. 6, 2007, Journal of Applied Psychology, Vol. 92, pp. 1524-1541.
2. The future of remote work. Greenbaum, Z. 9, Oct 2019, Monitor on Psychology, Vol. 50, p. 54.
3. https://www.bls.gov/news.release/atus.t06.htm. US Bureau of Labor Statistics. [Online]
4. Effectiveness of workplace social distancing measures in reducing influenza transmission: a systemic review. Ahmed F, Zviedrite N, Uzicanin A. 2018, BMC Public Health, Vol. 18, p. 518.
5. Working from home in the time of covid-19: how to best preserve occupational health? Bouziri H, Smith DRM, Descatha A, Dab W, Jean K. 2020, Occup Environ Med Epub ahead of print.
6. A review of telework research: findings, new directions, and lessons for the study of modern work. Bailey DE, Kurland NB. 2002, Journal of Organizational Behavior, Vol. 23, pp. 383-400.
7. Telework and health effects review. Tavares, A I. 2, 2017, International Journal of Healthcare, Vol. 3, pp. 30-36.
8. Emotional well-being and coping during covid-19. UCSF Dept of Psychiatry. [Online] 2020. https://psychiatry.ucsf.edu/coronavirus/coping.
9. Noguchi, Y. 8 Tips to make working from home work for you. [Online] NPR, Mar 15, 2020. https://www.npr.org/2020/03/15/815549926/8-tips-to-make-working-from-home-work-for-you.
10. Robinson, B. 9 Tips to be productive when working at home during covid-19. [Online] Forbes, Mar 14, 2020. https://www.forbes.com/sites/bryanrobinson/2020/03/14/9-tips-to-be-productive-when-working-at-home-during-covid-19/#29cd79df5a38.
11. Giurge LM, Bohns VK. 3 Tips to avoid wfh burnout. Harvard Business Review. [Online] Apr 3, 2020. https://hbr.org/2020/04/3-tips-to-avoid-wfh-burnout.
12. Duffy, J. 20 Tips for working from home. PC Mag. [Online] Mar 27, 2020. https://www.pcmag.com/news/get-organized-20-tips-for-working-from-home.
13. Borsellino, R. 7 Essential tips for working from home during the coronavirus pandemic. the muse. [Online] 2020. https://www.themuse.com/advice/coronavirus-work-from-home-tips.

COVID-19

The Future of the COVID-19 Pandemic: Epidemiologic Insights

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Of all the disruption created by Coronavirus Disease 2019 (COVID-19), nothing remains more constant than its enormous uncertainty. How the immediate and long-term future of the pandemic will play out remains unclear. Yet, it is certain that the world is now fundamentally different. COVID-19 has and will continue to adversely impact individual and population health, both directly and indirectly.

Nearly all epidemiologic models agree that with the reopening of society, viral resurgence will undoubtedly occur. Efforts to date have focused on slowing viral spread, yet the majority of the population remains at risk, and population immunity is thus far insufficient. Models also agree that the number of cases will continue to ebb and flow, albeit with much debate over the exact pattern and much concern that an even worse outbreak is eminent. Difficulty in predicting the extent, pattern, and duration of resurgence is linked to our insufficient knowledge of viral transmission and whether immunity confers any degree of protection.

Forecasting COVID-19 is important for public health planning. Several different models exist and are available online (1). Fundamental to all forecasting models is the reproductive number, a measure of the transmissibility of the virus (2). It represents the average number of people who catch the disease from an infected individual and can be applied not just at the beginning of an outbreak, but also to the rate of spread once control measures have been instituted, which is more relevant to us now.

One of the most basic forecasting models, and mostly commonly used, is the SEIR model that breaks the population into four compartments: the number of people susceptible, the number of people exposed, the number of people infectious, and the number of people who have recovered (or died) and are no longer capable of spreading the disease (3). More complex models involve a dynamic understanding of the mechanism of viral spread, using multiple variables and prognostic factors. In the beginning of the pandemic, the limited available data made it difficult to project what was going to happen with COVID-19. Knowledge of the initial experience of COVID-19 from China and the Lombardy region in Italy was essential to helping the US prepare and expand critical care infrastructure. Unfortunately, more time and further model development did not serve to increase the reliability of COVID-19 forecasting. We still lack a fundamental understanding of the key components of COVID-19 biology and how it is affected by temporal changes in things like weather and social contact.

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Moreover, a well-functioning model requires data that is not just reliable but interpretable in the appropriate context. Predicting mortality in critically ill COVID-19 patients is a relevant example of a model that can be altered by many factors independent of virus related pathology. Hospital and critical care capacity and strain, critical resource availability, and the time point at which mortality is assessed can all dramatically influence the rates of mortality of mechanical ventilation (4,5). Without consideration of these variables, it becomes difficult to understand what factors influence mortality in critically ill patients and almost impossible to apply these lessons to areas with different capacity and practices.

Critical care medicine unfortunately must deal with the immense health effects of policies that are invariably built on questionable evidence and assumptions. The consequences may be extreme: another outbreak of, and battle against, a disease that is as dynamic and labor-intensive as most of us have ever faced in our clinical careers. This would be exhausting by itself not considering the demands on critical care capacity and resources. At the peak of outbreaks, US cities may need up to 4.4 beds per 10,000 adults (6). Other consequences of COVID-19 will certainly be present; it is hard to ignore the socioeconomic impact of COVID-19 and its inevitable effect on health. It is therefore critical for us to maintain a high level of preparedness to deal with the next wave as well as to maintain skepticism and force ourselves to rigorously evaluate all data and models.

REFERENCES

1. Center for Disease Control. Coronavirus Disease 2019 Mortality Forecasts. Accessed 6.10.2020. Available at: https://www.cdc.gov/coronavirus/2019-ncov/covid-data/forecasting-us.html.

2. Delamater PL, Street EJ, Leslie TF, et al. Complexity of the Basic Reproduction Number (R0). Emerging Infectious Diseases. 2019;25(1):1-4.

3. Sanche S, Lin YT, Xu C, Romero-Severson E, Hengartner N, Ke R. High contagiousness and rapid spread of severe acute respiratory syndrome coronavirus 2. Emerging Infectious Diseases. 2020 Jul.

4. Zhou F, Yu T, Du R, Fan G, Liu Y, Liu Z, et al. Clinical course and risk factors for mortality of adult inpatients with COVID-19 in Wuhan, China: a retrospective cohort study. Lancet. 2020 28;395(10229):1054–62.

5. Petrilli CM, Jones SA, Yang J, Rajagopalan H, O'Donnell LF, Chernyak Y, et al. Factors associated with hospitalization and critical illness among 4,103 patients with COVID-19 disease in New York City. medRxiv. 2020 Jan 1;2020.

6. Li R, Rivers C, Tan Q, Murray MB, Toner E, Lipsitch M. Estimated Demand for US Hospital Inpatient and Intensive Care Unit Beds for Patients With COVID-19 Based on Comparisons With Wuhan and Guangzhou, China. JAMA Netw Open. 2020 May 1;3(5):e208297–e208297.

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EDITORIAL NOTES

Fellowship Program Reviews
If you would like to contribute a review for a Fellowship Program at your institution in a future issue of the SOCCA Interchange, please contact: Vivian Abalama, IOM, CAE at vabalama@iars.org.

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