Surgical Endoscopy (2020) 34:2856–2862
https://doi.org/10.1007/s00464-020-07631-3

SAGES GUIDELINES

SAGES primer for taking care of yourself during and after the COVID-19 crisis

Jonathan Dort[1] · John Romanelli[2] · Nabajit Choudhury[3] · Benjamin J. Flink[4] · Kathleen Lak[5] · Shauna Levy[6] · Bradley J. Needleman[7] · Charles J. Paget III[8] · Dana Telem[9] · Erin Schwarz[10] · Linda P. Zhang[11] · Patricia Sylla[11] · John D. Mellinger[12] · Brent D. Matthews[13] · Liane Feldman[14] · Aurora D. Pryor[15] · Horacio J. Asbun[16]

Received: 29 April 2020 / Accepted: 6 May 2020 / Published online: 20 May 2020

Abstract

COVID-19 is a pandemic which has affected almost every aspect of our life since starting globally in November 2019. Given the rapidity of spread and inadequate time to prepare for record numbers of sick patients, our surgical community faces an unforeseen challenge. SAGES is committed to the protection and care of patients, their surgeons and staff, and all who are served by the medical community at large. This includes physical health, mental health, and well-being of all involved. The fear of the unknown ahead can be paralyzing. International news media have chronicled the unthinkable situations that physicians and other health care providers have been thrust into as a result of the COVID-19 pandemic. These situations include making life or death decisions for patients and their families regarding use of limited health care resources. It includes caring for patients with quickly deteriorating conditions and limited treatments available. Until recently, these situations seemed far from home, and now they are in our own hospitals. As the pandemic broadened its reach, the reality that we as surgeons may be joining the front line is real. It may be happening to you now; it may be on the horizon in the coming weeks. In this context, SAGES put together this document addressing concerns on clinician stressors in these times of uncertainty. We chose to focus on the emotional toll of the situation on the clinician, protecting vulnerable persons, reckoning with social isolation, and promoting wellness during this crisis. At the same time, the last part of this document deals with the "light at the end of the tunnel," discussing potential opportunities, lessons learned, and the positives that can come out of this crisis.

Keywords Surgeon wellness · COVID-19 · Pandemic well-being · Burnout

COVID-19 is a pandemic which has affected almost every aspect of our life since starting globally in November 2019. Given the rapidity of spread and inadequate time to prepare for record numbers of sick patients, our surgical community faces an unforeseen challenge. SAGES is committed to the protection and care of patients, their surgeons and staff, and all who are served by the medical community at large. This

✉ Jonathan Dort
jonathan.dort@inova.org

1 Inova Fairfax Medical Campus, Falls Church, VA, USA
2 Baystate Health, Springfield, MA, USA
3 University of Tennessee Health Science Center, Memphis, TN, USA
4 Emory University School of Medicine, Atlanta, GA, USA
5 Medical College of Wisconsin, Milwaukee, WI, USA
6 Tulane University School of Medicine, New Orleans, LA, USA
7 Ohio State University School of Medicine, Columbus, OH, USA
8 Virginia Tech/Carilion School of Medicine, Roanoke, VA, USA
9 University of Michigan School of Medicine, Ann Arbor, MI, USA
10 SAGES, Los Angeles, CA, USA
11 Icahn School of Medicine At Mt Sinai, New York, NY, USA
12 SIU School of Medicine, Springfield, IL, USA
13 Atrium Health, Charlotte, NC, USA
14 McGill University, Montreal, QC, Canada
15 Renaissance School of Medicine, Stony Brook University, Stony Brook, NY, USA
16 Miami Cancer Institute At Baptist Health, Miami, FL, USA

includes physical health, mental health, and well-being of all involved.

The fear of the unknown ahead can be paralyzing. It is important to remember that while we have never gone through anything like this, neither has your friend from primary school, your coworker nor anyone else. International news media have chronicled the unthinkable situations that physicians and other health care providers have been thrust into as a result of the COVID-19 pandemic. These situations include making life or death decisions for patients and their families regarding use of limited health care resources. It includes caring for patients with quickly deteriorating conditions and limited treatments available. Until recently, these situations seemed far from home, and now they are in our own hospitals. As the pandemic broadened its reach, the reality that we as surgeons may be joining the front line is real. It may be happening to you now; it may be on the horizon in the coming weeks.

In this context, SAGES put together this document addressing concerns on clinician stressors in these times of uncertainty. We chose to focus on the emotional toll of the situation on the clinician, protecting vulnerable persons, reckoning with social isolation, and promoting wellness during this crisis. At the same time, the last part of this document deals with the "light at the end of the tunnel," discussing potential opportunities, lessons learned, and the positives that can come out of this crisis.

Emotional toll of the situation

One of the very basic instincts that leads to fear is the threat to personal safety. An out-of-proportion percentage of fatalities caused by this virus worldwide is in health care providers. The stories and images of war zone conditions in hospitals flood our inboxes and social media feeds every hour of every day. While this feels novel in the West, it is day-to-day life in other parts of the world, and therefore it's an opportunity for us to appreciate and learn from colleagues who live in lower resource settings as we serve those we need to serve now.

This fear is real, justified, shared, and appropriate. This fear unleashes a whole set of alternative emotions; anger at governments, health care systems, and hospitals for not being able to adequately supply or protect us, sadness over being stuck in this predicament that none of us signed up or petitioned for, uncertainty over how long this will last, how exposed we will become, how much we, and those we care greatly for, may suffer, and whether we all will survive it. All of these separate emotions share one quality; how hard it is to control them.

The key to success for managing this fear is to acknowledge those fears and to focus on the elements for which we do have control, as Mark Twain would say, "courage is resistance to fear, mastery of fear, not absence of fear." Use every precaution you have available to you with every patient you see; masks, gloves, gowns, handwashing, and sanitizer. Assume every patient has tested positive, whether in the operating room (OR), emergency department (ED), intensive care unit (ICU), or the elevator. We are bound to our hospital rules for personal protective equipment (PPE), but to the extent you are capable, be aggressive with your protection. SAGES has endorsed statements by the *American College of Surgeons (ACS)* and *Joint Commission* concerning your ability to protect yourself. Make sure your leadership has seen these statements. When you are at work, be vigilant about practicing physical distancing. Be pathologically cautious over where you go, what surfaces you touch, and what precautions you take. If you do not already have an obsessive–compulsive disorder, develop one. We have to face this fight. So, whether you are already in the fight or bracing to enter it, know that fear is here or on its way. Together, we need to expect it, accept it, and, most importantly, take control over it. Some concerns include, but are not limited to:

Fear of inadvertent viral transmission Events like the current COVID-19 pandemic can bring the fear of contagion and of loved ones falling sick. Healthcare workers are most exposed to the virus and many have contracted the disease with some fatalities. The fear of spreading it to family members is a real problem. Having to self-isolate from your social support in the case of a positive test adds to the stress of an already traumatized surgeon. In the current situation, when there is not enough personal protective equipment, it will only make the stress worse. Incidents of PTSD have been reported in parents and children who were quarantined during the SARS outbreak [1]. Apart from taking measures to minimize the spread of disease to family members or loved ones like isolation, wearing masks, hand hygiene, physical (not social) distancing, there are few things we can do to help during the period of isolation. Talking to friends and family via video call is a great way to be in touch with your loved ones. As suggested by astronaut Scott Kelly in the New York Times recently, maintaining a routine and picking up hobbies like reading, playing instruments or making art can help to cope with such situations [2].

Concerns regarding clinical redeployment The stress and anxiety that clinical redeployment carries with it is heavy. Anxiety of the unknown:

> What area of clinical medicine will I be asked to join? Do I have the necessary skills to help these patients in need?

Will I have oversight from a physician experienced in critical care or COVID management?
Will I have to ration care?
How often will/should I be deployed?

Much of this anxiety can be rooted in the fear of the unknown. Many of us may be forced into situations with uncomfortable clinical decisions based on limited resources. For instance, clinicians worldwide are forced to make life or death choices about rationing care [3]. While we have no way of knowing if or when the curve will be flattened, if our hospital surge plans will be enough or if our treatments will make an impact, what we do know is that regardless of our current specialty and regardless of the time since we practiced general medicine, that our contribution in fighting this medical nightmare is a unique and noble one. Our surgical training and heritage will support us. The role we may serve during the present need eclipses and stretches our normal patterns of practice, but not beyond the depth of our training backgrounds. Our SAGES community has issued statements on the *basics of mechanical ventilation* and *acute care surgery* management recommendations among others. We can help take control of our anxiety by ensuring that there will be oversight from a more experienced physician (critical care and infectious disease) that we can turn to for medical decision-making. On the flip side, we must be prepared to be asked to perform duties that are below our skill level. It is important to be flexible, open-minded, and adapt to the needs of our redeployment. If we are redeployed as a team, take control by ensuring that the junior members (residents, physician assistants, medical assistants) are donning/doffing proper PPE and are protected from unsafe clinical situations.

While deployment schedules may vary based on hospital needs, adequate recovery time must be provided between 8 and 12 h consecutive shifts. We need to stay alert for signs of fatigue among team members which can negatively impact patient care and personal safety during high-risk clinical situations. Delegation of tasks commensurate to the skills of each team member will help relieve anxiety and maintain focus.

Whether there is anxiety associated with feeling unprepared to physically or mentally deal with what is coming, or feeling that the system itself is ill-equipped to support us, lean on your partners, your medicine colleagues and your SAGES community.

Concern for personal and family safety during redeployment Not only is there concern for the clinical aspect of redeployment, there will also be significant mental strain from worrying about personal and family safety.

Will I have proper PPE and will it protect me?
Should I self-isolate from my family? What does that look like?
When is it safe to return to my family?

One way to minimize the emotional toll of redeployment is to prepare and strategize prior to redeployment. Understanding the PPE supply of the unit where you will be deployed, and devising a backup plan to ensure adequate PPE for the team will alleviate anxiety upon arrival to the redeployment site. Reviewing safety tips and best practices for personal safety and minimizing high-risk exposure with others on the frontline are extremely helpful to better prepare.

Surgeons should have thorough discussions with their family regarding how best to minimize contamination of their homes and transmission to family members. Strategies range from living separately in a hotel, rental home, or second home. Some surgeons chose to send their children to stay with relatives during the active period of redeployment. If these are not viable options, living in a separate bedroom or floor of the house can also diminish risk of transmission. There will be an emotional toll for sequestering and not having physical contact with family members. This is true for both the surgeon and their family members, especially young children who may not understand the situation. Video calls and parallel activities (taking walks together but with distancing, watching children play from afar, etc.) can help maintain the family connection. Self-isolation can be even harder or impossible for single-parent families, and these obstacles should be addressed early within the family and with Departmental leadership.

Once redeployment is over, there is no clear guideline regarding when the appropriate time to reunite with family is. If readily available, perhaps COVID PCR and/or antibody testing will alleviate anxiety and help confirm safety in returning to the family. Once reunited, some may consider wearing a facemask for a few days during the potential incubation period. If feasible, waiting the full 14-day incubation period will exclude the risk of transmission.

Financial hardship In many states, local governments have placed a moratorium on elective surgery. This was in concert with a recommendation from the *American College of Surgeons* regarding the cessation of elective surgical cases, echoed by the *SAGES statement*. This was done to make admission beds available for the expected surge of COVID-19 patients, as well as freeing up hospital resources that are needed to care for sick patients. Ventilator shortages are expected and already real in some centers, and operating rooms contain anesthesia machines that could be redeployed as ventilators for these patients. In addition, inpatient procedures can inadvertently expose our patients to

COVID-19. Anesthesia staff may be called upon to help manage the excessive number of intubated and/or critically ill patients. While this momentous change has occurred for all the right reasons, there is a burden on surgeons both as they contemplate stewarding their patients' needs as well as considering the fiscal implications to themselves, their staff, their employees, and the overall healthcare system.

Most of the recommendations were, fortunately, left to the surgeons to determine the urgency of operative cases, and that "urgent" and certainly "emergent" cases should proceed as planned. This unfortunately leaves a "gray zone" for determining what is elective.

Is a paraesophageal hernia elective, or urgent?
What if there is a gastric volvulus?
What about if the patient is in chronic pain?
What about patients for whom there were multiple ED visits for a clinical problem?

The surgeons are left to face their patients, and have to take the brunt of the dissatisfaction, which can be a significant stressor as well. Whether or not financial concerns color the definition of "urgent" and the ethical ramifications of this decision can also become a source of stress for surgeons.

An additional stressor is the concern about lost revenue and keeping businesses afloat. While some surgeons continue to work based on their case mix, others have virtually stopped. Also, those in private practice employ others that often become a small family, and those employees of the practice might have to be furloughed. If employed by a large health system, getting paid regularly is less of a concern, but salary reductions have been reported even in the setting of physicians at the most risk directly treating COVID-19 patients. Finally, even for those employed by a large health care entity, the most profitable cases for the hospital were the first to be stopped. No doubt even the large hospital systems will take a huge financial loss; how this will eventually play out is anyone's guess and again, creates uncertainty.

Another factor to consider is the financial hardship of our colleagues. As much as loss of income is frightening, logically we are still in a much better position than many of the nurses or other hospital employees that we work with daily. Despite the uncertainty of this crisis, we cannot lose sight of this fact.

Re-entering practice In a period wrought with uncertainty and chaos with regards to the pandemic and its strain on hospital resources, one potentially overlooked topic for robust discussion is how to return to relative normalcy in practice after the crisis eases. One can forecast changes in the delivery of care which will be stressful for surgeons and their teams who have limited exposure to new technology.

How does one resume elective work?
Do patients get rescheduled on an acuity basis?
Do they get rescheduled in the order they have been scheduled/cancelled?
Will surgeons get their pre-crisis amount of block operating time?
Will other surgeons who are harder hit by the crisis (either financially or due to high patient volumes) be given more operating time than usual to help catch up, and will that reduce access to the operating room for other surgeons?
Will patients be afraid to come to health care facilities after the crisis abates to have their elective surgery, or will there be a measurable loss of business and reduction in surgeon volumes due to fear of catching communicable disease?

While there are no known answers to the questions in the preceding paragraph, health care systems need to look carefully at where to deploy resources during times of crisis, and how they emerge from the crisis may be dependent on each system. For example, a hospital system with a large urban center, and smaller, outlying community hospitals might send many COVID-19 patients to larger institutions, allowing for resumption of elective cases at an earlier date once there is availability of surgeons, anesthetists, and nursing care (who may have been redeployed elsewhere). That may force surgeons to operate at facilities with which they have less familiarity and may bias their booking to lower acuity, less complicated cases. Surgeons should align with their hospital leadership as much as they can and are comfortable doing so to have open and honest dialogue about how and when to resume booking elective cases; their outpatient office visits could begin around the same time to begin seeing new patients again. While much uncertainty exists with this crisis, one potential overlooked element is exactly how to return to normal professional workloads. This uncertainty can serve as an additional stressor, but frequent conversations with OR and hospital leadership can help to ease the stress, and allow for a plan to move forward once given the ability to do so. With so much disruption caused by the nature of the pandemic, how to return to normalcy might not generate much thought, but it now is the time to begin thinking about this concept.

Vulnerable persons

Intimate partner abuse and abuse of children transcends all the demographic categories we draw. Shelter at home and self-isolation during the COVID-19 pandemic can be dangerous to those in abusive relationships. With stress levels and economic hardships heightening, an uptick in domestic abuse has been reported worldwide [4]. A close proximity and an inability to escape abusers at home leads to a tremendously dangerous situation putting additional lives at risk as victims often wait to be by themselves before they seek help. Moreover, with schools and daycares cancelled, children are more likely to witness intimate partner violence or be victimized themselves.

While resources are limited, options remain available to persons in an abusive household. First, if possible, remove yourself from the home. Hotlines for domestic abuse remain open and shelters have been deemed essential services and remain open during the COVID-19 pandemic. For those who are unable to leave their home, identify the safest place in the home with distance from objects that may be used as weapons.

Most importantly, *remember that you are not alone and support remains available*. Some resources include, but are not limited to:

National Domestic Hotline (24/7 and confidential): 1-800-799-7233
National Sexual Assault Hotline (24/7 and confidential): 1-800-656-4673

For those who are in positions of safety, please remember to check in on friends, families and colleagues during this time. Frequent touchpoints by phone or video communications to provide support or a trusted outlet for someone in an abusive situation may stimulate them to reach out and attain help.

Social isolation

While physical distancing is a necessary step to prevent the spread of this infectious disease, social isolation has negative consequences that can produce new stressors for clinicians. Given that surgery is mostly conducted in a team-based environment, becoming isolated socially is something new that most of us have never confronted. It is important to distinguish between the need to physically separate, but to stay connected with colleagues, partners, friends, and family. Between telemedicine and virtual meetings, our workplaces have made efforts to convert our nonoperative work-life into an electronic platform. What about adapting our life outside of work? Social isolation and loneliness have negative impacts on our health that worsen as we get older but there are ways for us to mitigate these issues even in these unusual times. Virtual meeting platforms can be used for group exercise classes, watching TV shows together, family reunions, happy hour, etc. Support groups are powerful tools used by many patients but they can be helpful to us and connect with those around us. Acts of service can help us feel connected to the surrounding world. In fact, as surgeons we typically thrive on helping others, and it can be challenging to feel unhelpful. This situation will challenge our resilience by reducing our participation in community and making us question our pursuit of purpose and meaning in our professional lives. However, this is also an opportunity to engage in reflection and consideration of the 'important but not urgent' elements of our lives.

Promoting wellness

Broadly speaking many surgeons have not mastered the work-life balance, and our work can be all-consuming. Despite the long work hours, our work typically includes a plethora of human interaction: patients, nurses, other physicians, operations and meetings. Ordinarily our days can be so full that we crave alone time or other ways to decompress.

There are many barriers for surgeons to retain wellness and deal with uncertainty in the time of COVID-19. We as surgeons tend to be action or at least accomplishment-oriented, flexible in our approach, resilient, and tireless in commitment and driven to matter in the world at large. We tend to measure our success in quantifiable means. We have a direct effect on the morale of the other professionals around us though we do not always realize this. We are poor at acknowledging our own weakness and need for help and have been conditioned to independence and self-sufficiency. We are very much control-oriented, and a high demand- low control environment is a major driver of psychological stress and physical illness [5]. COVID-19 is taking us to such a place and that puts surgeons at more risk. Loss of elective cases causes financial hardship and isolation. We also define ourselves often as sub-specialists: e.g., bariatric surgeons, colorectal surgeons, or acute care surgeons, but forget that we are amongst the broadest trained of all medical professions and we were trained as general surgeons before we became sub-specialists.

Many of the standard methods of wellness such as exercise, yoga, mindfulness, and eating well, we either already do, or do not find useful on a personal basis. For some, this crisis will offer an opportunity to introduce one of the practices, but for most, this can be challenging in the setting

of social isolation. Further, we understand this disease and the risk to ourselves and our families as well as any other individuals of our community. We have been taught not to acknowledge fear or weakness and understand that "there is an ethical consensus that healthcare workers have a *prima facie* duty to work because of everything that has been invested in them [6]." This essentially pulls us in two directions and adds to our stress. How can we then retain wellness in this period of uncertainty?

We as surgeons have the unique ability to reinvent ourselves during this time of crisis to continue to be valuable contributing members of the surgical community despite the barriers to our usual areas of productivity. Some surgeons may be redeployed to other areas of their health system and may have the ability to work with new teams towards common goals to address this crisis. Finding a way to remain busy and productive is intrinsic to what makes us surgeons, and this need must be met in some form. We have a unique opportunity to be leaders both nationally and locally and assist others around us. This is an opportunity to rally our teams and look for ways to support those around us more than we ever have. We have the tools to soberly digest the facts and utilize this knowledge to assist those around us.

Specific recommendations to retain wellness revolve around acknowledging both our strengths and our weaknesses, filling our time with work that is useful and necessary in the crisis setting, and by supporting those around us. Let us recognize that we are highly valued by society, both normally and especially at this time. Those around us will look to us for leadership and assessment of facts and clinical decision-making. The fear for our well-being and that of our families, colleagues, and patients makes us human and not weak.

Another concept to consider is how to use time if we are not at the front lines of the COVID-19 battle. Catch up on administrative work, serve in roles of leadership, teach, conduct research or spend time with family or in self-care. From a clinical perspective, step in and help with emergency general surgery, trauma, or surgical oncology as you are able to free other colleagues to flex to other areas of need.

Also, how can we support those around us? Consider your partners in practice or your division, and make their wellness also part of your awareness. Remember that surgeons culturally have difficulty asking for help especially in terms of emotional aspects of our lives. We were conditioned in our residencies to persevere through excessive work hours and stress; this may have served a purpose once but is a model that likely needs to be abandoned. The military learned this many decades ago, that you take care of your own and leave no man or woman behind [7]. This has not been the mantra of surgeons for decades but can be. Be your brother or sister surgeon's keeper and be aware of who is struggling. Much of the battle of non-wellness is recognition.

The light at the end of the tunnel

The strategic vision for SAGES is, "Reimagining surgical care for a healthier world". While there is no dispute that the COVID-19 pandemic has produced a tremendous loss of life, strain on health care systems and providers, and a negative financial impact on the global economy, one must look beyond this crisis to a near-future surgical world which could look quite different. Perhaps this is a chance to reimagine surgery during this chaotic period into better care for our patients. The socio-economic disparities in care that have been revealed by this crisis make this work even more urgent as we move forward.

While much of our regular work flow has become disrupted by the COVID-19 pandemic, it is also true that desirable disruptive change can normally be difficult to implement locally, given the typical volume of patients and routine work burden. This period of reduced surgical activity might provide time for strategic thinking, re-development of clinical programs, and discussions about impactful changes to patient care including ways to provide equitable care to the most vulnerable populations. Barriers to change could be addressed now during these times, so that the post-crisis surgical world could be improved. Hospital systems could consider altering what surgical care occurs at the tertiary centers, and what is delivered in the community hospital setting. Change has been thrust upon the surgical world, but that doesn't mean that it is all undesirable by definition.

Further, the sudden cessation of elective surgical practice may afford the opportunity for innovation on the outpatient side. Reimbursement has been the previous barrier to widespread adoption of telehealth and video telehealth. While these obstacles have been temporarily lifted by the federal government, many states, and some private payers, it remains to be seen if this is a permanent change. In a positive step, according to the ACS Bulletin, "the Coronavirus Aid, Relief, and Economic Security (CARES) Act, enacted March 27, appropriated $200 million to the Federal Communications Commission (FCC) for an emergency program to provide funding so health care providers can purchase services and devices necessary to provide telehealth care [8]." One can envision post-operative surgical care being delivered in a totally different manner with the advent of these technologies. This may lead to more outpatient efficiency, even potentially increased productivity, and also having the potential to improve access to care and patient engagement.

Yogi Berra once said, "It's tough to make predictions, especially about the future." However, all prediction models about this pandemic share a common outcome; that it will end. While there is uncertainty about what lies

between here and there, we will endure it together, and we will emerge from it together. The shared financial losses will transform into the shared professional satisfaction of having answered the call of our duties when we were needed most. The uncertainty of collectively stretching beyond our professional comfort zones will transform into a shared strengthening of our collected wisdom and knowledge. And most significantly, standing side by side on this unprecedented battlefield, with common purpose and resolve, will transform us into a more bonded and unified group than we have ever been before. Indeed, it already has.

Reference

1. The Economist, April 4th, 2020.
2. https://www.nytimes.com/2020/03/21/opinion/scott-kelly-coronavirus-isolation.html. Accessed 10 Apr 2020
3. https://qz.com/1821843/ethicists-agree-on-who-should-get-treated-first-for-coronavirus/. Accessed 10 Apr 2020
4. https://www.msn.com/en-us/news/money/domestic-violence-on-the-rise-during-covid-19-outbreak/ar-BB11I1hY. Accessed 10 Apr 2020
5. Garcia-Herrer S et al (2017) The influence of recognition and social support on European health professionals' occupational stress: a demands-control-social support-recognition Bayesian network model. Biomed Res Int 2017:4673047
6. James Tabery, PhD as quoted by Christopher Cheney in "4 ETHICAL DILEMMAS FOR HEALTHCARE ORGANIZATIONS DURING THE COVID-19 PANDEMIC" https://www.healthleadersmedia.com/clinical-care/4-ethical-dilemmas-healthcare-organizations-during-covid-19-pandemic).
7. Sotile WM, Sotile MO. The Resilient Physician 2002. American Medical Association.
8. https://www.facs.org/covid-19/newsletter/041020. Accessed 10 Apr 2020

Additional Resources

9. AMA Tips for keeping your practice in business during the COVID-19 pandemic: https://www.ama-assn.org/delivering-care/public-health/tips-keeping-your-practice-business-during-covid-19-pandemic
11. Ethical Framework for Health Care Institutions & Guidelines for Institutional Ethics Services Responding to the Coronavirus: https://www.thehastingscenter.org/ethicalframeworkcovid19/