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Strength in a Time of Fear: Brigham and Women's Confronts COVID-19

Kelly Jong

In the face of a crushing surge of cases that halted elective surgeries, strained resources, and threatened to overwhelm staff, Brigham and Women's Hospital in Boston acted quickly to transform its facility into one of the most efficient and successful COVID-19 programs in the country. Much has changed since the days when its staff had to carefully reuse PPE as it managed an ICU capacity of more than twice its usual number of patients. In early March 2021, Brigham and Women's achieved a 70% vaccination rate among

staff and a growing campaign to help educate and vaccinate the community.

Riding the bumps

As COVID-19 gripped the nation in early 2020, the staff at Brigham and Women's began the tenuous work of developing its own strategy for containing the pandemic. The hospital experienced a surge that peaked in late April. According to James P. Rathmell, MD, Executive Editor of *Anesthesiology*, and Professor and Chair, Department of Anesthesiology,

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Lindsey Baden, MD, an attending physician in infectious disease, associate professor of medicine at Harvard Medical School, and lead investigator of the international clinical trial that enabled FDA Emergency Use Approval of the Moderna COVID-19 vaccine, receives his first vaccine dose in January 2021.



You're Vaccinated... Now What?

Richard Simoneaux

Steven L. Shafer, MD
Editor-in-Chief

We've learned a vast amount about SARS-CoV-2 in the past year. We know it comes from bats, most likely from Yunnan, China (asamonitor.pub/3rVUMXJ). We know that variants are emerging that increase infectiousness and escape humoral immunity (*Science* 2020;370:1464-8; *Nature* March 2021). We can track coronavirus evolution in



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Rx/Museum: A Weekly Dose of Art and Healing

Gordon Glantz

So much – perhaps too much – is made of the struggle between those who are left-brained (linear thinkers) and those who are right-brained (holistic thinkers). On one side of the brain, the left, you will find those motivated by logic. On the other, the right, people are more motivated by emotive gut instinct.

But that doesn't mean that there cannot exist a literal meeting of the mind – or minds – by providing those in the science-based medical field with a respite founded in the arts. During this stressful pandemic, the need is clear.

Enter Rx/Museum, a pilot program of the Department of Anesthesiology and

Critical Care at Penn Medicine in partnership with the Health Ecologies Lab at the University of Pennsylvania.

Aaron Levy, PhD (University of Pennsylvania), and Lyndsay Hoy, MD (Penn Medicine), are the faculty directors of the virtual program that delivers emailed artworks and reflections to its 1,100+ subscribers. These artworks – via partnerships with the Philadelphia Museum of Art, Barnes Foundation, and Slought Foundation (run by Dr. Levy on the Penn campus) — arrive every Monday for a year.

Since its launch in July 2020, Rx/Museum has received positive press

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Lyndsay Hoy, MD



Aaron Levy, PhD



SPECIAL SECTION

**Pediatric Pain: New Approaches for Our
Most Vulnerable Patients**

24-33

Guest Editor: Muhammad Rafique, MBBS, FASA

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Perioperative and Pain Medicine at Brigham and Women's Hospital, "We went from questioning what we should do with elective surgery on a Friday to completely closing down elective surgery on a Monday, staffing up ICUs, and reducing to 30% of our overall surgical volume very quickly." The hospital's ICU capacity jumped to more than twice its usual patient volume as the COVID-19 surge went on, requiring the hospital's anesthesiology team to care for a high number of very sick patients with limited PPE resources.



James P. Rathmell, MD

With a growing number of critically ill patients and very little information on the disease, the hospital deployed its emergency response team. Dr. Rathmell explained that they adopted the same hospital incident command structure that would be used for a natural emergency or terrorism situation. A pre-determined hierarchy with an emergency medicine physician as the hospital commander worked quickly to coordinate staff to serve in various roles by redistributing staff from their usual positions into roles that were more critical at the time.

Within a matter of days, the anesthesiologists with intensive care experience were redeployed to open additional units while a COVID response team joined in a daily conference to plan shifts and ICU coverage, line and intubation teams, and telemedicine, which grew rapidly. Dr. Rathmell said a large number of recent graduates and young faculty members familiar with working in ICUs volunteered to help.

Despite the robust staffing, it became obvious in the first few weeks of the April 2020 surge that critical care teams were overworked, so the hospital cre-



Meaghan Hurley, BSN, RN, a nurse in the emergency department at Brigham and Women's Hospital, greets arriving patients in an outdoor mass-testing facility during the peak of the COVID-19 pandemic in Boston.

ated three different intubation and line placement teams to work around the clock, allowing critical care teams with a usual load of 8-10 patients to safely care for 15-20 patients in the same period of time. In addition, transport teams relieved respiratory therapists who were overwhelmed with the number of ventilators in use and could no longer move patients to imaging.

A new approach

As the months went on, clinicians at Brigham and Women's became so well-versed at treating COVID-19 patients that when a second surge took hold of the community in December 2020, the ICUs weren't overwhelmed and, in general, patients weren't as sick. By this time, Dr. Rathmell said the hospital's approach to treatment had changed. "We learned with the rest of the world that early intubation was not the best approach and instead found that people are much more comfortable with using

medicines such as dexamethasone early," he explained.

Late in the year, Brigham and Women's COVID-19 program was operating with relative ease. What was once a dramatic shortage of PPE had grown to a healthy supply of resources. Elective surgery returned with some restrictions: patients required a negative COVID-19 test within 48 hours of the surgery and cases were restricted to those that did not require a hospital stay unless postponement would result in probable harm to the patient. Perhaps most important, Brigham and Women's worked closely with other Boston-area hospitals to serve as a transfer destination for other locations that were hit asymmetrically and overwhelmed with patients. Dr. Rathmell explained that comparing notes during the second wave with other hospitals in the health system helped ensure that one location was never overwhelmed by inpatient capacity.

“What was once a dramatic shortage of PPE had grown to a healthy supply of resources.”

Community partnership

Over the last year of battling COVID-19, one thing has remained constant: the partnership between Brigham and Women's and the Boston community. "Masks were donated early on," said Dr. Rathmell. "And increased production of N95 has allowed us to now have 90 days of supplies in storage with a robust stockpile of masks, gloves, and surgical gowns." In addition, an outpouring of support from the community allowed the hospital staff to enjoy meals and coffee from local restaurants twice a day for months on end.

In return, the clinicians at Brigham and Women's worked harder than ever to reach out to the community and



Eric Goralnick, MD, attending physician in emergency medicine at Brigham and Women's Hospital and Incident Commander for the Mass General Brigham Healthcare System, with Rachel Wilson, Chief Operating Officer for CiC (Cambridge Innovation Center) Health. Dr. Goralnick provided medical oversight and CiC Health provided logistical support for Massachusetts' first mass-vaccination site at the New England Patriots' Gillette Stadium in January 2021.

provide guidance in a time of fear and uncertainty. "People were frightened of coming to the hospital and emergency room, so we stood up mobile testing facilities that went into the community and tested people where they lived," Dr. Rathmell said. "We are working hard to get out into the community to answer questions and reduce hesitancy to take the vaccine so the people of Boston can take advantage of resources such as the mass vaccination site at Gillette Stadium, which can vaccinate as many as 6,000 people a day."

Though the care of COVID-19 patients has stabilized at Brigham and Women's hospital, questions linger about the emergence of disease variants from around the world, such as: Are they more infectious? Are they more deadly? Will the vaccine protect against them? As a slow return to normal lingers on the horizon, with a vaccine promising fewer patients and less severe cases, optimism burns strong. "Like many others," said Dr. Rathmell, "I have some measure of hope that we will find our way through this." ■

Kelly Jong is a freelance writer with over 10 years of experience in medical journalism. She holds a master's degree in organizational psychology from Pennsylvania State University.

Payment Progress Series*Continued from page 7*

as well as strategies to prevent the 33% Problem from expanding into new payment arrangements. ASA is also committed to creating resources for members to help them discuss this discrepancy and communicate their value effectively.

An additional component of the Economic Strategic Plan Initiative is exploring alternative payment models

(APMs). Value-based payment models are another way to help anesthesiologists receive appropriate compensation, and ASA is working to provide tools to help members understand and participate in APMs.

"We are here to advocate for physicians, anesthesia caregivers, and ultimately for patients, to make sure they receive the highest quality anesthesia care that we can provide," concluded Dr. Troianos. ■

Get Involved!

- Participate in the ASA's Annual Conversion Factor Survey. The 2021 survey will launch this June.
- Connect with the public to raise awareness of the important role anesthesiology holds throughout the health care continuum. www.asahq.org/madeforthismoment
- Educate yourself on this issue, so you can help others understand the problem.
- Communicate the value of anesthesia — in and out of the OR — with your colleagues in medicine.
- Engage with local lawmakers, and share the **33% Working Group Report**.