Career Connection

Recovering From the COVID-19 Financial Crisis

Kelly Jong

Throughout the COVID-19 crisis, health care workers have had to face myriad challenges: exhaustion, personal sacrifice, loss of patients, physical danger, and emotional overload, to name a few. On top of the daily struggle of dealing with the disease, one underlying factor has amplified the stress of managing the pandemic: finances. From layoffs and cut hours to closed practices and fewer procedures,

anesthesiologists across the country have faced pay reductions and loss of income, despite working harder than ever to provide for their patients. But as the world pushes forward into recovery, vaccines become more prevalent and health care workers begin to adjust to a post-crisis world, the financial impact of the pandemic remains. If you're facing financial uncertainty, these steps to recovery can help you build a more stable financial future.

The COVID-19 toll

Over a year into the crisis, evidence of the financial impact of COVID-19 on health care workers abounds. The American Medical Association (AMA) reported that 81% of physicians surveyed in July and August 2020 said they faced an average drop in revenue of 32% since the beginning of the pandemic,

Justin Harvey, CFP, ChFC, RICP

In the Know: SARS-CoV-2

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to synonymous mutations (mutations that *don't change* the amino acid) can bifurcate genomic changes between "purifying selection" (very few changes in amino acids, because the virus fits the environment well) and "Darwinian selection" (lots of amino acid changes reflecting strong selection pressure) (asamonitor.pub/3gYoWFJ). This has been done for SARS-CoV-2 (asamonitor.pub/3zPZhYc). SARS-CoV-2 has relatively few amino substitutions for the number of silent mutations. This is strong evidence that the predecessor of SARS-CoV-2 evolved gradually over decades until jumping into humans in late 2019.

Summary

1. Scientists have never found the original SARS-CoV in an animal species. All of the genomic components for SARS-CoV can be found in bats living in a single cave with hundreds of coronavirus strains circulating among them.
2. There are likely many thousands of beta coronavirus genomes. We will probably never find the proximate predecessor of SARS-CoV-2. This is expected.
3. Coronaviruses recombine genomic elements frequently because the RNA genome is transcribed in segments, leading to "copy-choice" errors.
4. Some naturally occurring coronavirus spike proteins bind avidly to human ACE2 receptors.
5. The "furin cleavage site" is not uncommon in coronaviruses. The HKU9 beta coronavirus, sequenced in 2007, has a nearly identical RNA sequence (Figure 3). Both are immediately downstream of CAGAC, which predisposes that location to recombination.
6. The SARS-CoV-2 genome is entirely consistent with natural selection and random mutation/recombination acting on constantly mixing populations of bats and other animals (e.g., civets, pangolins, you, me).

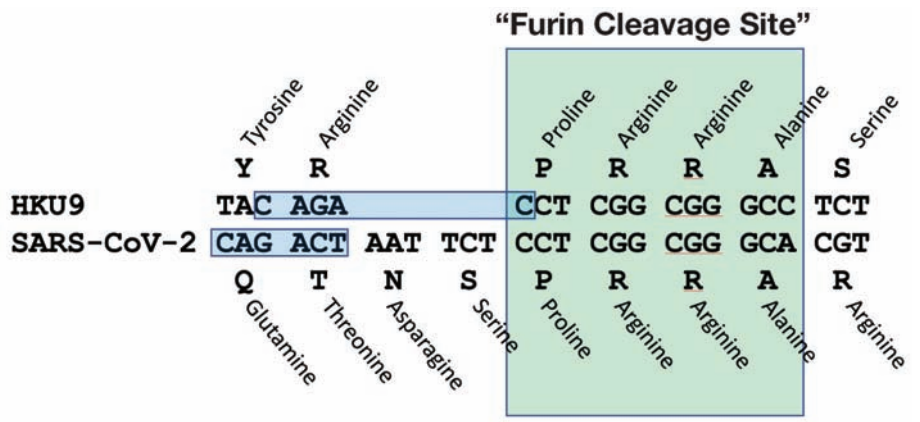

Figure 3: A "furin cleavage site" on the HKU9 genome almost exactly matches the site on SARS-CoV-2. The synonymous substitute at the 12th nucleotide from adenine (A) to cytosine (C) is inconsequential. Redrawn from reference 17 (*Arch Virol* 2020;165:2341-8). For both SARS-CoV-2 and HKU9, it is downstream of the sequence CAGAC, a sequence prone to causing copy-choice recombination events.

Figure 4: Multiple coronavirus genomes have furin cleavage sites, shown in red. Redrawn from reference 18 (asamonitor.pub/3h0Ggdk).

There is no evidence to support the "lab-leak" theory, although that does not rule out the possibility that SARS-CoV-2 came to Wuhan on the shoe of a researcher who visited the bat caves in Yunnan province. The presumed epicenter, the Huanan Seafood Wholesale Market, is about 11 miles from the Wuhan Institute of Virology and located on the opposite side of the Yangtze River. The Huanan Seafood Wholesale Market is about the same distance from the Wuhan train station, one of the four most important transit hubs in China.

As to the "engineered virus" theory, the available evidence rules that out (*Nat Med* 2020;26:450-2).

The zoonotic theory is consistent with every other emergent infectious disease in the past 100 years, including rabies, HIV, H1N1, Ebola Sudan, Ebola Makona, Hantavirus, West Nile virus, Zika virus, Lyme disease, yellow fever, avian flu, SARS, MERS, and plague. Our numbers, our biomass, and relentless travel make us the jackpot for viral evolution. We are endlessly encroaching on wild habitats harboring perhaps hundreds of thousands of unknown viruses. Future pandemics will happen. However, by doggedly searching for the origins of SARS-CoV-2, as Dr. Shi and others have done for SARS-CoV, we can better understand how to anticipate and prepare for future pandemics.

Additional reading

The Benhur Lee Lab has an outstanding three-part tutorial on the origins of SARS-CoV-2, which I used as a starting point for my analysis above (asamonitor.pub/3zMaSrm; asamonitor.pub/3gSeAHr; asamonitor.pub/3gJnyYC). The assistance of Christian Stevens, an MD/PhD student in the Lee research team, is acknowledged with gratitude.

Dr. Kristian Andersen, lead author of the April 2020 paper in *Nature* on the origins of SARS-CoV-2, has maintained an active blog on the subject (*Nat Med* 2020;26:450-2; asamonitor.pub/3gLybtO). Dr. Andersen's blog led to multiple papers documenting the furin cleavage site in multiple coronaviruses included in this review. ■

a figure that is likely to persist as the crisis continues. Medicare Physician Fee Schedule spending during the early months of 2020 fell as much as 57% below expected, the AMA reported, while the American Hospital Association estimated a financial impact of $202.6 billion in lost revenue for American hospitals and health care systems since the pandemic began. The 2020 Medscape Physician Compensation Report found that 43,000 health care workers were laid off in March 2020 and 9% of independent medical practices had closed at least temporarily at the start of the pandemic, only further increasing the individual financial burden of the crisis.

Justin Harvey, CFP, ChFC, RICP, president of APM Wealth and host of the Anesthesia & Pain Management Success podcast, said that the mental and emotional toll of the pandemic and its financial burden has been heavy, and acknowledging that strain is an important step to beginning recovery. "Anesthesiologists were thrust into situations of significant personal danger with insufficient PPE, less pay, and a crazy schedule, and were left to figure out how to keep up a high standard of care to the patients they serve with the expectation that they have boundless physical and emotional energy," he said. "These daily challenges have been made worse by the fact that COVID has had a real economic impact on their lives." In his work with anesthesiologists, Harvey saw a wide spectrum of employer responses: everything from helping physicians with ample paid sick leave if they became sick with COVID-19 to physicians being fully or partially furloughed and having to absorb these financial burdens themselves.

Those working in private practices had even more pronounced challenges, Harvey added. Some groups saw case volume and revenue fall to near zero, while having to help to run their facilities' ICUs, or to create makeshift ICUs to accommodate the virus surge, he said.

In addition to the lasting financial struggle many individuals and facilities are facing, Harvey highlighted that one of the lasting impacts of COVID-19 is the revelation that even careers that have been historically stable, such as those in health care, can still be jolted by global emergencies. "Many physicians are renewed in their determination to pursue financial independence and to buffer themselves against these events in the future," he said. "I've seen significant new interest among physicians who are interested in self employment, side businesses, or other economic opportunities as they've seen how they have been forced to bear financial burden during this time, and many are asking if the cost is worth it."

Getting back on track

To begin the journey back to financial stability, Harvey advised creating intentionality around goal setting. Have a written plan that you revisit one or two times per year to track your progress, and continually ask yourself two questions: Do I feel financially secure? Can I cover a loss of income lasting three or six months? "When the answer is no, this creates a baseline stress level that bleeds out into every area of life. Addressing this insecurity by ensuring that you have a robust emergency fund and strong disability insurance from one of the six carriers with proper own-occupation definitions should be paramount considerations."

To understand financial progress, Harvey suggested quantifying your savings rate by determining what percentage of monthly or yearly income goes toward building wealth, rather than taxes or living expenses. He cautioned that most people saving less than 10% of their gross income are going to have a difficult time protecting themselves from the macro forces in health care that can take a financial toll on physicians. A high savings rate of more than 20% creates protection and flexibility, decreases baseline stress, and can allow you to change employment on your own terms rather than being beholden to a job where you're not satisfied, he said.

Consider some trade-off questions for investing, Harvey advised. Consider things like accelerating paydown on student loans or a mortgage versus investing in the stock market. When you're looking at taxes, consider mitigating unnecessary tax expense, maximizing pre-tax savings in employer plans, not spending down your HSA accounts, taking advantage of the back-door Roth IRA, and understanding applicable deductions for self employment income.

Ultimately, Harvey said the key to financial stability post-COVID-19 is to realize that financial freedom is in your own hands. "You need to swim upstream, take control of your own future, and begin to put systems in place that will help you make progress and decrease the stress and pressure in your life," he said. "This is the best hope you have for a long and rewarding career in medicine." ■

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.