Adapting to Succeed in Radiology’s Postpandemic Future

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INTRODUCTION

During the global pandemic caused by the severe acute respiratory syndrome coronavirus 2, many have quoted Admiral Stockdale [1] who, based on his experience as a prisoner of war, cautioned against optimism and said, “You must never confuse faith that you will prevail in the end—which you can never afford to lose—with the discipline to confront the most brutal facts of your current reality, whatever they might be” [1].

At time of writing, the world remains in the tight grip of this crisis, and across our global radiology community, it is clear that our story will now divide into two chapters: pre- and postpandemic. The authors are based in New York City, and the City That Never Sleeps has spent several months “on pause” [2]. Like most organizations, ours operated at a fraction of our normal volume while our health system treated thousands of patients with coronavirus disease 2019 (COVID-19). So far, more than 100,000 people have died because of the virus in the United States, and the number of cases and deaths continues to rise [3]. The anticipated global recession caused by shutting down the economy to prevent spread of the virus will undoubtedly impact health care [4], but what are the more radiology-specific and persistent disruptions that we might expect as we climb back toward our new normal?

COVID-19 has exposed us to heterogeneity of leadership styles and competencies and reminded us that certain leadership styles are better suited to a crisis situation [5]. What are the leadership strategies that will transcend the pandemic and most effectively steer us to a more successful future than our current reality might suggest?

Although nobody could have predicted the pandemic, those practices who anticipated future negative scenarios and planned for them will be best positioned to recover. Our department engaged in a scenario planning exercise in 2019 and identified the following “impact factors” that we would need to consider in optimizing departmental operations and performance whatever happened in the future:

- Reimbursement
- Regulations
- Replacement
- Research and education changes
- Cyber and terrorist attacks, epidemics, and pandemics

Although our practice experience as an academic medical center in an urban setting might not seem to translate to that of a small rural private practice, we believe that the need to plan for continued uncertainty combined with authentic transparent leadership is universally applicable.

REIMBURSEMENT CHALLENGES

The current “brutal reality” is that many radiology practices will struggle to recover from the loss of revenue associated with the appropriate shutdown of nonemergency services over several months. This will be compounded by the need to maintain social distancing and add new equipment cleaning tactics that will preclude the resumption of prior workflows and volumes. No practice type will be spared. Some practices won’t survive in their current form and may need to be merged with or acquired by another entity to survive. Radiologists in practices who have been previously acquired by private equity groups or corporations have already been confronted by their subordinate position in the hierarchy of needs that puts return on investment ahead of human capital [6]. Furloughs and salary cuts were more immediate in this sector, and one physician services company, Mednax, recently announced that it was selling its radiology business to reduce debt [7]. Academic departments who have previously been able to maintain multiple missions, supporting research and education as well as clinical service, may need to shift that balance toward restoring clinical revenue in the near term.
Those practices that had already retained or developed effective financial expertise were better positioned to leverage the complex array of relief programs offered during the pandemic. Practices with established reserves, solid banking relationships, and strong relationships with their referring physician and hospital partners will, not surprisingly, do better across a broad range of uncertain futures.

Difficult decisions will need to be made regarding salary cuts or even layoffs, retirement program contribution suspension, and reductions in health insurance benefits. Effective leaders will communicate these changes transparently and with empathy as they evolve, applying similar or even greater cuts to their own compensation. Offers of future employment may need to be reworked or even retracted. How practices handle these decisions and their execution will be remembered in our relatively small professional community. As Mr Rogers is reported to have said: “It takes a lifetime to build a good reputation, but you can lose it in a minute.”

**REGULATIONS**

In response to the pandemic, national regulations governing payment for physician and hospital services were rapidly relaxed to ensure an adequate supply of providers to affected areas. Changes implemented during this time have ranged from a decision by Medicare to pay for a greater range of telehealth visits including telephone calls to the ability to provide such services using non–HIPAA-compliant platforms such as FaceTime (Apple Inc, Cupertino, California). By statute, these waivers will not extend beyond the end of the state of emergency declared by the president on March 13, 2020, although Seema Verma, administrator of CMS, recently opined “I can’t imagine going back” [8].

Many states have also declared states of emergency and used their power to waive physician licensure requirements so that out of state providers can provide care. Scope of practice requirements such as those that mandate physician supervision of advanced practice providers (APPs) have also been relaxed in some parts of the country. Liability protection has been instituted by some states, and some states, including New York, have mandated first dollar coverage of COVID-related care (ie, no copays are applied).

Commercial insurance plans have changed their coverage policies for telehealth and waived copays and preauthorization requirements but are subject to the decisions of their large employer clients, who are typically self-funded, in applying those changes across all their lines of business. Policy changes applied in a patchwork fashion have taxed already challenged provider administrative staff as they try to translate the payers’ often opaque communications and multiple confusingly named lines of business.

The degree to which this deregulation survives the emergency will be important in shaping radiologists’ future. No radiologist would protest the permanent abolition of burdensome pre-authorization programs but an expanded ability of APPs to practice independently in lieu of radiologists would likely be perceived much more negatively. We predict that broader coverage of telehealth and relaxation of state licensure requirements will persist. We anticipate that the professional organizations that represent APPs will seek to preserve and extend autonomous practice for those providers. In the anticipated recession, we expect downward pressure on fee-for-service rates as well as less overall coverage as employers either choose not to offer health insurance or offer less generous plans. Although there are practices, notably national teleradiology and corporate groups, that already practice across state lines and although radiology is a specialty that can be practiced at a distance from the patient, the removal of the administrative barriers associated with state licensure may accelerate practice consolidation, which is typically associated with decreased autonomy for individual physicians.

A successful reimbursement and regulatory future for radiology depends on a unified voice with policymakers and payers. Although practices may negotiate rates locally with insurance plans, overall coverage policy typically derives from Medicare, and regulations are implemented at the federal and state level. Our department maintains 100% membership of the ACR and the New York State Radiology Society; our medical school is active with the American Association of Medical Colleges and has a team focused on government relations. Our hospital partner is actively engaged with peer advocacy groups and all levels of government. Smaller practices should equally invest in professional society membership as well as develop even closer engagement with local lawmakers to influence policy. Across the practice spectrum, investment of physician volunteer time in advocacy activities is a critical survival strategy.

One’s view of the future is undoubtedly colored by one’s position in the career journey. The job market will likely be impacted by the reimbursement changes outlined previously as well as the volatility of the stock market and how it changes retirement plans. There have been concerns about the relatively older average age of the radiology workforce and predictions of a future workforce shortage. If older radiologists work longer will new graduates have difficulty finding work?

**REPLACEMENT**

In our departmental scenario planning, we considered this umbrella term to apply to workforce turnover, replacement of the radiologist by APPs, artificial intelligence tools, and
innovations such as liquid biopsy that would obviate the need for imaging as well as combinations of these that might differentially impact sub-segments of the profession.

The trope of the “invisible radiologist” who might easily be forgotten or replaced was certainly dispelled at our institution during the crisis in that many radiologists, including trainees, were redeployed to support care of COVID-19 patients. Not only did they become part of the clinical teams in the intensive care unit, but they uniquely added their imaging expertise offering image viewing as part of rounds and performing bedside ultrasound guided procedures [9].

Aggressive efforts by APPs to practice independently have not heretofore included the radiology specific APP, the radiologist assistant (RA). These professionals, typically radiologic technologists who have undergone additional training, have pledged to work under the supervision of radiologists and at time of writing are unable to bill for those supervised services let alone independently, which puts their long-term viability in doubt. There has been recent active debate in the radiology community about the role of the RA. Our department employs APPs and RAs, finding them to be an essential component of our team, but lack of support from the radiologist community may lead to either the demise of the RA or a shift in that group’s allegiance to other APP groups.

The expected flurry of activity around algorithm development for COVID-19 detection was mitigated by the fact that imaging of COVID-19 patients, although valuable in certain circumstances, was quickly excluded as a viable screening method. The threat that AI will replace human radiologists continues for most practices to be just that: an unfounded threat. The promise of AI to augment radiologists’ performance is, however, something that most radiologists eagerly anticipate. With an aging population and the inherent value of imaging, we anticipate continued strong demand for imaging in the future. Image interpretation will, we predict, continue to be supervised by radiologists but for successful practices will incorporate midlevel providers and machine learning tools to augment the productivity of the radiologist. As yet unknown is how reimbursement will adapt to the use of these augmentations.

**RESEARCH AND EDUCATION CHANGES**

It is too early to assess the overall impact that the pandemic will have had on research output. Laboratories shut down and graduate students were sent home, but work continued remotely. Many institutions shifted focus toward COVID-19-related projects from developing tests to creating a vaccine. The fact that Isaac Newton developed what would become differential calculus during the plague [10] suggests an imminent flood of discovery. Researchers who have been cooped up at home, supervising home schooling and potentially also juggling a clinical schedule via video, might disagree. There are emerging data [11] that women’s academic productivity may have been disproportionately impacted. Given the disparities in academic leadership opportunities for women already inherent in the promotion system, active measures may be needed to help female radiologists recover from this lag. Our institution has “reset” the tenure clock by a year to account for anticipated decreased productivity during the pandemic.

Traditional models of education and professional gatherings have been completely upended by the pandemic. Meeting after meeting has been canceled or transitioned to a virtual format culminating with the largest scientific and industry meeting, that of the RSNA, announcing an all virtual format for 2020. Radiologists’ future willingness to travel to hear each other present research or deliver continuing education may be limited both by their own caution as well as that of their employer. The loss of the informal networking associated with in-person meetings will undoubtedly have an impact but might also necessitate more structured processes for inclusion on committees and projects, which may benefit a more diverse group.

As parents who have supervised their child’s education through this period knows, online learning does not simply consist of the same educational methodology taught remotely. The ACR’s American Institute for Radiologic Pathology course that most US trainees attend was, until March 2020, still a 4-week onsite course. It will be offered for the rest of 2020 as a virtual course. Modern educational methods such as flipped classrooms and polling will need to supplement or even replace traditional didactic lectures. Our department is creating a “virtual visiting professor” exchange program to allow trainees to be exposed to external speakers. An added benefit of this will be increased speaking opportunities, essential for promotion, for more junior faculty members who might have found it difficult to travel if they have small children.

**CYBER AND TERRORIST ATTACKS, EPIDEMICS, AND PANDEMICS**

The escalating protests after the murder by police of George Floyd in Minneapolis in May 2020 have compounded the disruptions caused by the pandemic. A second wave of COVID-19 cases in the fall of 2020 is widely predicted. The effects of climate change continue to manifest including a cyclone in India in May 2020.

All these illustrate the uncertainty of our future and the need to prepare to adapt. Our department was able to deploy home working capability rapidly, but our scenario planning had already highlighted that both our clinical operations and our personnel are, not
unexpectedly, highly concentrated in New York City. Future departmental planning will need to account for the potential need to continue significant homeworking and to double down on redundancy and data security.

MOVING FORWARD

Although respecting the late admiral’s service and personal perspective [1], we disagree that optimism has no place in leading through a difficult situation. An optimistic viewpoint must obviously be informed by the evidence, including the “brutal reality,” but in a rapidly evolving and uncertain situation, it helps maintain cohesion and energy. The particular circumstances of isolation and loss of routine associated with the pandemic made maintaining a sense of optimism critical. Biweekly virtual meetings for our department were invaluable in ensuring that we stayed connected during the height of the crisis. Transparency and honesty are key to ensuring that the team feels engaged. The facts will change and not every decision will stand the test of time, but as the World Health Organization health emergencies program executive director Dr Michael Ryan, MB BCh, MPH, said about the pandemic: (https://www.youtube.com/watch?v=AqRHH6e-y6IMichael Ryan (WHO Health Emergencies Programme) at daily press briefing on COVID 19 March 13th 2020) “If you need to be right before you move, you will never win.” A willingness for leaders to acknowledge and take responsibility for decisions and to actively solicit a diversity of opinions to inform those decisions will improve organizational performance for the long term as well as in crisis situations.

The temptation to hunker down and maintain a narrow focus on one’s own institution is understandable at times like this. However, great leaders will use this opportunity to share experiences, learn from others, and prepare the next generation of health care executives. Many of our department leaders contributed and learned from online panels in which we could share our experiences [12]. Despite the oft cited example of Winston Churchill as a crisis leader who was swiftly removed by the British electorate once World War II ended [13], most radiology leaders will not suffer the same fate. Their experience of the pandemic will vary but the leadership traits that will enable them, and the organizations they lead, to not only survive the emergency but also succeed for the future are universal.

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