

Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Elsevier hereby grants permission to make all its COVID-19-related research that is available on the COVID-19 resource centre - including this research content - immediately available in PubMed Central and other publicly funded repositories, such as the WHO COVID database with rights for unrestricted research re-use and analyses in any form or by any means with acknowledgement of the original source. These permissions are granted for free by Elsevier for as long as the COVID-19 resource centre remains active.



COVID-19 Recovery Will Involve Strategy, Not Just Operational Effectiveness

Joshua M. Liao, MD, MSc

In early 2020, a novel coronavirus emerged and ground the global economy to a halt. US health care was not spared, as hospitals and practices around the nation stopped elective procedures, deferred noncritical imagexaminations, and canceled nonessential office visits. Other practices closed their doors altogether. Behind these changes, patient volumes plummeted by ≤60%, and organizations drastically reduced their workforces and implemented other costcutting measures [1,2]. Likewise, radiology practices observed decreases in imaging volumes, prompting them to offset the resulting financial stress by halting nonurgent and elective imaging and applying for federal loans [3,4]. These moves reflected broader trends, as the country and other businesses turned to heavy economic, restrictions to curb viral spread.

Our country and health care system have been on a path toward recovery ever since. With mounting economic pressure and flattening coronavirus disease 2019 (COVID-19) case rates, state officials have started sequentially opening sectors of their economies using phased approaches, such as those encouraged by the Centers for Disease Control and Prevention [5]. Within health care, hospitals and group practices began reinitiating services such as elective procedures, screening imaging examinations, and routine office visits.

For radiologists and other clinicians alike, these moves have triggered widespread discussion about "recovery strategy," a collection of measures needed to recover from the pandemic. To date, the discourse has been dominated largely by a focus on several operational elements: adequate supply of personal protective equipment for employees, sufficient capacity to test employees and patients, expanded policies about facility cleaning and physical distancing, and patient volume quotas.

These are necessary components of recovery, but they are not strategy. In seminal work published more than two decades ago, Michael Porter [6] described the essence of strategy as "choosing to perform differently" than others do. The basis of this definition is that, although superior performance relies on both strategy and operational effectiveness, the two concepts are often confused. In Porter's framework, operational effectiveness describes how well activities are done, whereas strategy describes which activities are done. In turn, companies focused on operational effectiveness will seek to do the same tasks or activities as others but better. Companies focused strategy will seek to fundamentally different tasks and activities than others.

This is a critical perspective for radiology practices and the broader health care community. For one, because all providers must implement operational safety elements as a matter of necessity, emphasizing them is akin to emphasizing operational effectiveness. And as Porter and others have observed about operational effectiveness, there is only so much benefit that can be achieved by focusing on the implementation of masking, cleaning, distancing, and testing. Ultimately, these are minimum requirements for operating in the post-COVID-19 world that do not inherently improve a group's competitive position or the quality of care it provides to patients.

For another, radiology practices can capitalize on the distinction between operational elements and strategy. Despite all the disruption and challenges it has caused, the pandemic is also creating the opportunity to revisit and fundamentally improve upon how health care is delivered. Telemedicine may be the most obvious example, but others exist in the areas of clinical decision making, health care teaming, patient experience, and site of service. Seizing this opportunity to focus on a true COVID-19 recovery strategy means understanding how the health care landscape will change going forward. Although nothing is certain, and situations will likely inevitably vary by local circumstances over time, a few trends are likely.

First, COVID-19 is poised to affect patient decision making in the coming months and years. As

recognition of the pandemic first spread across the United States, fear prevented patients from seeking care in emergency departments and caused some individuals to forgo critical treatments such as organ transplantation [7,8]. Going forward, even with their doors reopened, practices cannot assume that all patients will feel comfortable returning to health care facilities and the status quo of care. Safety is not the same as the perception of safety.

Instead, as we come out of the pandemic, practices must actively address issues such as safety and other drivers of patient behavior. Doing so will take humility and dedication, particularly for practices serving marginalized patient populations that harbor distrust of the medical system, as well as practices located in areas with higher risk for viral resurgence in the coming years. Nonetheless, a focus on patient decision making can be a useful longer term strategy. Just as it plays a major role in determining the success of our recovery [9], the psychology behind Americans' behaviors will dictate other behaviors after the pandemic has passed. Practices can improve those behaviors by pursuing new activities and programs, such as nudge interventions to improve imaging-based cancer screening [10].

Second, by affecting health insurance coverage, the pandemic could change how practices organize and deliver care to patients. Prior evidence from other settings suggests that transitions between coverage types can positively (eg, individuals who transition from Medicaid-only to more dual-Medicare/Medicare generous coverage) or negatively (eg, women when their spouses transition to Medicare) affect health access and quality [11,12]. Similarly, rising unemployment from COVID-19 could expose patients to harms by driving individuals and their dependents from employer-sponsored commercial insurance plans to marketplace and Medicaid plans.

An abrupt change in payer mix could also adversely affect providers, causing them to reconsider financial projections and the ability to provide certain services under current business models. For instance, radiology practices that project volumes for a certain imaging service may need to account for how variation in coverage affects imaging utilization [13]. As they recover from COVID-19, practices have an opportunity to anticipate these changes and adopt strategies that can meet the needs of patients under new payer mix and benefits plans.

Third, COVID-19 may prompt health systems to shift from volumebased to a range of cost-based business models. Most immediately, the pandemic has made it harder to accurately predict volumes, which will depend on an array of patient, epidemiologic, and policy factors across patient populations, modalities, and radiology subspecialties [13]. broadly, COVID-19 has revealed the extreme dependence of health care operations on patient volumes, thereby underscoring wellrecognized problems with fee-forservice reimbursement.

Organizations may respond and seek to buffer themselves from this type of financial exposure by shifting from fee-for-service toward costfocused models such as capitation or population-based payment. For radiologists, who have been exposed to capitation incentives dating back more than 20 years to the managed-care era, potential options for doing so can vary in intensity, ranging from participation in a value-based care model built upon a fee-for-service chassis (eg, Medicare accountable care organizations) to the development of capitated outpatient radiology contracts [14,15].

Regardless, without strategic planning, practices that partner with these organizations may suffer under such changes. As a relevant example for radiology practices, consider how a referring organization's incentives and decisions about imaging referrals might change after a shift from fee-forservice reimbursement (in which it is compensated more for ordering a study) to capitation (in which it is compensated less for doing so). Similar to dynamics observed during the managed-care era, referring providers may use financial incentives and other initiatives (eg, dashboards displaying imaging utilization, prior authorization requirements) that serve to reduce the volume of referrals. Practices that use the COVID-19 recovery period to anticipate and strategize about potential changes to referral volumes will clearly be better prepared to thrive in different circumstances compared with groups that do not.

Ultimately, the process of COVID-19 recovery creates both operational challenges and strategic opportunities for radiology practices and other health care providers. Although much of the attention thus far has been trained on the former, groups could also stand to benefit by focusing on the latter. Several potential trends—in patient behaviors, case mix and health benefits, and payment models—may represent particularly promising areas for this work.

REFERENCES

- Mehrotra A, Chernew M, Linetsky D, Hatch H, Cutler D. What impact has COVID-19 had on outpatient visits? The Commonwealth Fund Available at: https:// www.commonwealthfund.org/publications/ 2020/apr/impact-covid-19-outpatient-visits. Accessed June 20, 2020.
- Fadel L, Stone W, Anderson M, Benincasa R. As hospitals lose revenue, more than a million health care workers lose jobs. National Public Radio Available at: https://www.npr.org/2020/05/08/852435761/

- as-hospitals-lose-revenue-thousands-of-healthcare-workers-face-furloughs-layoff. Accessed June 6, 2020.
- 3. Lee CI, Raoof S, Patel SB, et al. Coronavirus disease 2019 (COVID-19) and your radiology practice: case triage, staffing strategies, and addressing revenue concerns. J Am Coll Radiol 2020;17:752-4.
- **4.** Naidich JJ, Boltyenkov A, Wang JJ, Chusid J, Hughes D, Sanelli PC. Impact of the coronavirus disease 2019 (COVID-19) pandemic on imaging case volumes. J Am Coll Radiol 2020;17:865-72.
- Centers for Disease Control and Prevention. CDC activities and initiatives supporting the COVID-19 response and the president's plan for opening America up again Available at: https://www.cdc.gov/coronavirus/2019-ncov/downloads/php/CDC-Activities-Initiatives-for-COVID-19-Response.pdf. Accessed June 6, 2020.
- **6.** Porter ME. What is strategy? Harvard Bus Rev 1996;74:61-78.
- Wong LE, Hawkins JE, Langness S, Murrell KL, Iris P, Sammann A. Where are

- all the patients? Addressing COVID-19 fear to encourage sick patients to seek emergency care. NEJM Catalyst. Available at:. https://catalyst.nejm.org/doi/full/10.1 056/CAT.20.0193. Accessed July 2, 2020.
- 8. Hafner K. Fear of COVID-19 leads other patients to decline critical treatment. The New York Times Available at: https://www.nytimes.com/2020/05/25/health/coronavirus-cancer-heart-treatment.html. Accessed June 6, 2020.
- Liao JM. Psychology—not science or politics—will determine a successful reopening for America. Forbes Available at: https://www.forbes.com/sites/coronavirusfrontlines/ 2020/05/30/psychologynot-science-or-politicswilldetermine-a-successful-reopening-for-america/ #664a7c9a1eb1. Accessed June 6, 2020.
- Patel MS, Navathe AS, Liao JM. Using nudges to improve value by increasing imaging-based cancer screening. J Am Coll Radiol 2020;17:38-41.
- Burns ME, Huskamp HA, Smith JC, Madden JM, Soumerai SB. The effects of the transition from Medicaid to Medicare

- on health care use for adults with mental illness. Med Care 2016;54:868-77.
- 12. Schumacher JR, Smith MA, Liou J, Pandhi N. Insurance disruption due to spousal Medicare transitions: implications for access to care and health care utilization for women approaching age 65. Health Serv Res 2009;44:946-64.
- Madhuripan N, Cheung HM, Cheong LHA, Jawahar A, Willis M, Larson DB. Variables influencing radiology volume recovery during the next phase of the coronavirus disease 2019 (COVID-19) pandemic. J Am Coll Radiol 2020;17:855-64.
- Levin DC, McArdle GH, Lockard CD. Capitated contracting in radiology: negotiating techniques, financial calculations, and utilization management. Radiology 1996;198:651-6.
- **15.** Kangarloo H, Ho BK, Lufkin RB, et al. Effect of conversion from a fee-for-service plan to a capitation reimbursement system on a circumscribed outpatient radiology practice of 20,000 persons. Radiology 1996;201:79-84.

Dr Liao has received personal fees from Kaiser Permanente Washington Research Institute outside the submitted work. Dr Liao is an employee of his practice.

Joshua M. Liao, MD, MSc: Value and Systems Science Lab, University of Washington, Seattle, WA 98195; e-mail: joshliao@uw.edu