

# How Academic Medical Centers Can Navigate the Pandemic and Its Aftermath: Solutions for 3 Major Issues

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## Abstract

The COVID-19 crisis has seriously affected academic medical centers (AMCs) on multiple levels. Combined with many trends that were already under way pre pandemic, the current situation has generated significant disruption and underscored the need for change within and across AMCs. In this article, the authors explore some of the major issues and propose actionable solutions in 3 areas of concentration. First, the impact on medical students is considered, particularly the trade-offs associated with online learning and the need to place greater pedagogical emphasis on virtual care delivery and other skills that will be increasingly in

demand. Solutions described include greater utilization of technology, building more public health knowledge into the curriculum, and partnering with a wide range of academic disciplines. Second, leadership recruiting, vital to long-term success for AMCs, has been complicated by the crisis. Pressures discussed include adapting to the dynamics of competitive physician labor markets as well as attracting candidates with the skill sets to meet the requirements of a shifting AMC leadership landscape. Solutions proposed in this domain include making search processes more focused and streamlined, prioritizing creativity and flexibility as core management capabilities to be sought,

and enhancing efforts with assistance from outside advisors. Finally, attention is devoted to the severe financial impact wrought by the pandemic, creating challenges whose resolution is central to planning future AMC directions. Specific challenges include recovery of lost clinical revenue and cash flow, determining how to deal with research funding, and the precarious economic balancing act engendered by the need to continue distance education. A full embrace of telehealth, collaborative policy-making among the many AMC constituencies, and committing fully to being in the vanguard of the transition to value-based care form the solution set offered.

**T**he coronavirus pandemic is hastening the transformation of some traditional health care models and unleashing tremendous uncertainty among all stakeholders—perhaps none more multidimensionally than academic medical centers (AMCs). AMCs perform 3 critical missions that have been significantly upended. Medical schools educate students for practice expertise, yet their students are facing limitations in some clinical rotations, and the pedagogical implications of virtual

learning remain an open question. Some medical research has been interrupted or cut back, with concerns over institutional finances and future federal funding. And preparing the next generation of doctors for new care and research paradigms, a changing labor market, and even compensation expectations have become more complicated by the crisis.

How should AMCs navigate this shifting landscape? We explore 3 key areas of focus for AMCs: student impact, leadership recruiting, and financial/structural considerations. In each case, we seek to pinpoint the chief challenges medical school leaders face in the pandemic environment and offer a set of solutions we believe have strong potential to engender near-term stability and future growth.

### Impact on Students

While a number of medical didactics have been migrating in recent years to the “flipped classroom” mode of pedagogy in preclinical learning, schools are now dealing with pandemic-related disruption of all stages of the educational process.<sup>1</sup> Conventional clinical rotations

have become more challenging given health risks, and certain in-person learning such as laboratory work will need to be altered to comply with social distancing guidelines. AMC educators are also recognizing that telehealth is a powerful force reshaping the health care landscape and that doctors should be equipped with a diverse skill set to prepare for a more virtual future. These educational dislocations are accompanied by substantial opportunities to build students’ knowledge in areas of high interest and timely importance, such as public health, computer science, and communication skills. We see a consistent theme emerging: while medical education need not be entirely overhauled, the ongoing disruption can prompt a vital reimagining of curricula and practices to engage students and develop them into more agile physicians operating in increasingly complex environments.

### Key student challenges

#### The transition to online learning.

Even before the pandemic, preclinical courses were shifting to a predominantly remote model, centered on online access to recorded lectures that allow students the flexibility to learn at their own pace.

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One study published in February 2020, immediately before schools shut down for the semester or quarter, observed that only one-third or fewer students at some schools attended in-person classes when online recorded presentations were available.<sup>2</sup> Moreover, experiments in e-learning for direct or supplemental education have been conducted successfully over the past several years in courses such as pathology and dermatology.<sup>3</sup> Yet so much of medical education is predicated on learning through physical interaction: with faculty, with laboratory/clinical environments, with patients, and with peers. The reality is most palpable in clinical rotations, which in some specialties have been meaningfully curtailed because of the crisis. AMCs have struggled to generate clinical learning processes that replicate or substitute for the traditional model.<sup>4</sup> The inability to use time-tested practices has significant implications, with some analysts asserting that breaks in medicine's compact and fast-paced curriculum may induce significant long-term negative societal consequences.<sup>5</sup>

**Teaching virtual care techniques.** As students and teachers alike have coped with lost proximity, so, too, has remote care rapidly become more prevalent in health care delivery.<sup>6</sup> Telemedicine has received a tremendous boost during the crisis and is expected to grow significantly in coming years. An emerging pedagogical goal among medical educators is to train effective telemedicine practice techniques to maintain doctor-patient relationships. To address this, one academic leader advocates for targeted training in the "webisode manner" that physicians will need to employ for effective telemedicine.<sup>4</sup> This teaching would emphasize imparting a broad range of communicative strategies—including using conversation to evaluate and diagnose—to overcome the lost benefits of in-person consultations. Learning how to treat patients remotely is a new field for clinical teachers themselves, and we perceive that the entire subject of patient relationships will increasingly be a central concern of the educational process.

## Solutions

**Leverage technology as a new avenue for contemporary education.** Clinical practice is becoming ever more digital; medical education must do so as well.<sup>7</sup> Specific technological initiatives include:

- Further development of virtual clinical simulations;
- Technology-enabled at-home rotations in fields such as radiology; and
- Accelerated assessment of innovative tools such as virtual/augmented reality and artificial intelligence.

We believe academic leaders will need to maintain fluidity in their educational planning as the coronavirus crisis continues to unfold. Maintaining a balance between technology-based remote learning and hands-on practice is key. Medical students have vocalized a desire to accept some risk to participate in the crisis response, noting that such practical training is a highly effective learning tool.<sup>8</sup> Educators know that they need to both keep students safe and help them learn to practice safely under difficult conditions. We believe a healthy curricular balance can be achieved if we acknowledge that technology brings losses as well as gains. Education specialists assert the critical importance of placing teachers in control of acquisition and use of the technology.<sup>9</sup> This approach mirrors advice long offered in health care practice to include physicians in planning for electronic health records and other technologies that heavily affect them.

**Develop students' knowledge of and capabilities in public health.** Students can be valuable resources during crises. They can serve as ancillary support to patient-facing practitioners, including by participating in contact tracing and disease surveillance, data collection and analysis, and patient and community outreach.<sup>10</sup> A recent report by a coalition of academic doctors noted that thousands of U.S. medical students in their final semester could create a powerful "surge capacity" in the event of a prolonged crisis.<sup>11</sup> Medical school education also can facilitate students' heightened interest in public health by integrating the field more deeply in the classroom, including through expanded course and simulation offerings. AMC relationships with their surrounding communities, including providing social work, drug rehabilitation, counseling, and a host of wellness/prevention services, can provide space for students to interact with and contribute to active public health systems.<sup>12</sup> Such service learning has been shown to help students and communities

better understand and address social determinants of health.<sup>13</sup>

**Build partnerships across academic disciplines.** The future of clinical practice and leadership will reward an even more diverse set of skills, including advanced data analysis, technological capabilities, and management "soft skills" like nuanced communication. Educators will find valuable opportunities to expose students to intersecting fields such as computer science, engineering, mathematics, social sciences, and the humanities. A 2019 study assessed the efficacy of a certificate course offered by the University of Toronto in improving medical students' programming capabilities. Participants not only felt more confident in their understanding of computer science but also believed they strengthened their algorithmic and logical thinking skills in ways that made them see the linkage between computational ideas and medicine.<sup>14</sup>

## Impact on Leadership Recruiting

Crisis situations never fail to spotlight the critical need for effective, flexible leadership. For AMCs, every step of the leadership recruiting process—from skill identification and candidate sourcing to evaluations and selection—has grown more complicated in recent years. The pandemic has exacerbated the situation. To counter continuing headwinds in securing both management and physician talent, AMCs will need to pay close attention to 2 key recruiting questions: *who* brings key characteristics needed to inspire innovation on the administrative, clinical, research, and pedagogical levels, and *how* can searches be enhanced to yield top candidates more consistently and cost-effectively.

## Key leadership challenges

**A competitive physician talent market.** AMCs have long been challenged to stay competitive in the marketplace for experienced practitioners and physician leaders. While the roles of academic physicians have evolved and expanded in past decades, much of the process for hiring them has remained static, including candidate searches (or lack thereof), criteria-setting and evaluations (at times rigid and inconsistent), and compensation. At the same time, doctors have historically had no shortage of employment options available to them.

As one example, a 2019 Merritt Hawkins study found that 69% of primary care and internal medicine final-year residents received more than 51 employment offers each.<sup>15</sup> The Association of American Medical Colleges projects growing physician supply shortages in the next decade and beyond.<sup>16</sup> Although some of the shortfall may be alleviated by greater use of physician assistants and other non-MD professionals, as well as a better distribution of physicians to geographic areas and specialties of need, AMC leaders will continue to compete heavily for top-notch clinical talent however the supply-demand equation shifts.

**Finding leadership candidates with the right skill sets.** AMCs are increasingly complex organizations that require dynamic leadership to manage a variety of diverse constituencies and objectives. In recent years, executive searches have prioritized clinical-care candidates able to bridge departmental boundaries and build vibrant teams, who are adept at managing budgets, and who can bring a strategic, visionary eye to help their institutions adapt to health care's transformations. In a number of cases, evaluations have gravitated away from heavy emphasis on quantitative measures (e.g., number of publications) toward cultural fit and demonstrated leadership ability to effect change while showing the empathy required to support today's caregivers. The pandemic has affected this process, preventing essential relationship-building activities such as candidate presentation meetings and on-campus interviews. Those constraints can dampen organizations' confidence that their searches will yield the best candidates. Opportunities to build longer-term pipelines are also being lost due to canceled summer internships and fellowships. A 2020 study saw 33% of respondents not offering any program.<sup>17</sup>

## Solutions

**Build more targeted, streamlined search processes.** Remotely conducted searches dictated by social distancing have their downsides, particularly for candidates who may find the process constrains the ability to present their complete capabilities and to gain contextual insight about the position and colleagues offered by face-to-face interviews. But remote searches also have many benefits. AMCs are finding that video technology enables them to save many thousands of

dollars on hotels and airfare for several candidates to visit campus. Searches can also be completed more quickly by compressing the time span for conducting many interviews. Additionally, with less face-to-face interaction, some centers are attempting to measure soft skills early in the process using sophisticated online assessments that tease out desired characteristics and competencies. A clear, multilevel opportunity exists to expand these and other beneficial "lean management" recruitment approaches.

**Commit to creativity and flexibility as core management competencies.** The pandemic crisis has underlined a critical lesson: successful patient care requires great teamwork. Leadership development must foster strong collaboration skills. AMCs are in a unique position to enhance future leaders' collaboration skills by creatively integrating learning across many disciplines of medical education. A leading example is Case Western Reserve University's Health Education Campus, a partnership with the Cleveland Clinic to construct a unified center for medical, nursing, dental, and physician assistant students. Interprofessional efforts, as well as further integration of medical practice with growing branches of knowledge such as artificial intelligence, can foster rethinking traditional physician and staff responsibilities to promote a holistic care delivery model. Our firm belief is that leaders who seize the opportunities for creativity will best position their organizations for growth and leadership in medical education and practice.

**Take advantage of outside expertise.** Our experience suggests that postpandemic talent acquisition will require the deployment of all available recruitment tools. AMCs will need to "cast a wide net" to find leadership candidates, likely looking deeper into the ranks of physicians and perhaps those currently at nonacademic organizations. Whether as recruiters or consultants, outside advisors can bring established networks as well as an independent perspective on defining desirable "archetypes" for emerging and changing AMC leadership roles.

## Financial Considerations

AMCs are reliant on multiple sources of revenue—including clinical services, tuition, philanthropy, and government

and foundation grants—all of which are uncertain as the pandemic crisis continues. From a leadership perspective, returning to financial normalcy may not be entirely amenable to customary cost-saving techniques. Given the complicated array of factors influencing education and care delivery, financial decision making must be conducted with an eye toward preparing for a future environment that may be more virtual, more technology focused, more outpatient-centric, and more community oriented. Achieving long-term competitiveness while attending to immediate economic health will require buy-in and collaboration from a broad array of long-term stakeholders who are reliant on the stability and well-being of the AMC enterprise.

## Key financial challenges

**Evaporation of clinical revenue and cash flow.** Hospitals and health systems around the nation are coping with the financial upheaval, now nearly a year old, instigated by the temporary elimination of elective procedures and many outpatient services. The American Hospital Association projects that total hospital/system losses will have exceeded \$300 billion for all of 2020.<sup>18</sup> AMCs are certainly not exempt from this reality, and their financial challenges have even more devastating implications. Large public and private universities that own or are affiliated with AMCs are heavily reliant on the liquidity generated by their health care facilities—in some cases, well more than half of the universities' operating revenue.<sup>19</sup> The fate of many medical schools, therefore, is meaningfully correlated with the strength of the associated clinical enterprises.

**Impacts on research.** Research is an important component of the academic medical institution for at least 3 reasons: supporting the other educational missions; attracting top talent to the faculty, and advancing discovery that creates knowledge capable of translating, over time, to improved diagnosis, treatment, and prevention of disease as well as the potential to foster wellness. Though typically conducted at a financial loss, research is cherished as an important vehicle for medical knowledge and leadership. In the short term, some medical research has been paused while other studies, deemed "essential" by government guidelines and served by multiyear funding

contracts, have continued. Future research support, however, is very much uncertain. In addition, philanthropic contributions to universities may be constrained, and federal and state funding as well as support from foundations are by no means guaranteed, especially if a prolonged national economic recession occurs. AMCs will need agility to access expanding research funding in the COVID-19 area.

**Balancing enrollment and tuition amid modified instruction.** AMCs are also exposed to widespread uncertainty about future student enrollments. Prospective and current students are questioning not merely the health implications of congregating for live instruction but also the true economic and educational value of virtual learning. If AMCs are forced to continue online instruction in the next academic year, they are vulnerable to the same possibilities affecting all of higher education: students electing to defer or decline matriculation and the potential need to institute tuition reductions and debt relief. Lower tuition revenue would affect cash flow and create immediate budgetary shortfalls at a number of medical schools, especially those lacking other sources of revenue.

## Solutions

**Embrace telehealth as an organization-wide focus.** Distance care can be a realm of opportunity for AMCs to generate new growth and change the cost structure. Exposure to telehealth during the crisis appears to be garnering acceptance. A June 2020 survey of patients found that 28% had used telehealth in the preceding 90 days compared with fewer than 10% before the pandemic. The vast majority (89%) of those who used it were satisfied with the experience.<sup>20</sup> Importantly, telehealth can improve access to care as long as patients are comfortable with and have access to technology. Virtual care delivery is on track to become a mainstay of health care, and we argue that AMCs are well positioned to lead and innovate in this area. As discussed above, medical schools can help develop best practices and train on their usage. Schools will also be called upon to promote competencies that will be required by new telehealth leadership roles.

**Engage in collaborative policy-making.** The COVID-19 crisis has shown that systemic changes are required in many areas. Leadership discussions should be

held with the full range of AMC-invested parties to ensure that all viewpoints are heard and to seek consistency with regard to immediate decisions and long-term policies. Input from university and hospital administrators, faculty, on-the-ground clinicians, patients, and staff can generate broad solutions for priorities such as revenue diversification and research support that will contribute to sustainable financial stability and growth. Federal, state, and local governments are another important constituency. AMCs often serve as critical infrastructure within their towns and cities and are central to the pandemic response. The economic health of both institutions and communities are intertwined. They will need to work collaboratively to succeed amidst budget deficits, patient financial hardships, and rising costs.

**Lead the charge in developing new industry models of value.** Ultimately, the vigor of AMCs depends on positive health care transformation that achieves the promise of value-based care and population health management. AMCs must be in the vanguard of this transformation, using all of their influential pedagogical, research, practice, and leadership levers.

## Concluding Observations

AMCs are deeply woven into the fabric of the health care system in the United States and occupy a unique position. Even as widespread vaccination augurs some return to prepandemic stability, the COVID-19 crisis has placed AMCs in precarious near-term positions affecting their students, their leadership recruitment needs, and their overall financial condition. We assert that the measures and strategies described provide specific ways AMC leaders can enhance their ability to navigate the current crisis successfully. Even more, they can propel themselves along an important path to innovation that will produce the right next generation of physicians and maintain their standing at the forefront of the drive for a healthier society.

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