

EDUCATION AND RESEARCH

Schools of Medicine: Strategic Outlook for 2025 and Beyond

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The strategic, operational, and financial environment for schools of medicine (SOMs) is evolving rapidly, compelling these cornerstones of academic healthcare to rethink how they fulfill their core missions and support society's healthcare needs through their educational, research, and patient care endeavors.

Academic healthcare has seen tremendous change over the past 15 years. Class sizes have grown, new SOMs have been developed, and curricula have been revamped. New areas of scientific exploration and technology have emerged, along with fresh concepts on their application to education and patient care. SOMs are expected to help address the provider shortage even as they recover from the turbulence of the pandemic. Combined with the seemingly continuous pressure on funding sources, technological advances, and shifting learner expectations, SOM leaders are finding that their ability to sustain and further their organizations' success is dependent on their ability to adapt.

This article provides high-level perspectives on the continuing (and new) challenges that SOMs will face over the next decade and recommended strategic responses to sustain their success.

ACCELERATED CHANGE IN EDUCATION

The unfortunate circumstances created by the pandemic compelled SOMs to rapidly develop, evaluate, and reframe their education models and highlighted how technological advancements could address long-standing challenges, such as access to educators and the cost of medical education.

SOMs shouldn't wait for the next crisis to apply emerging technologies.

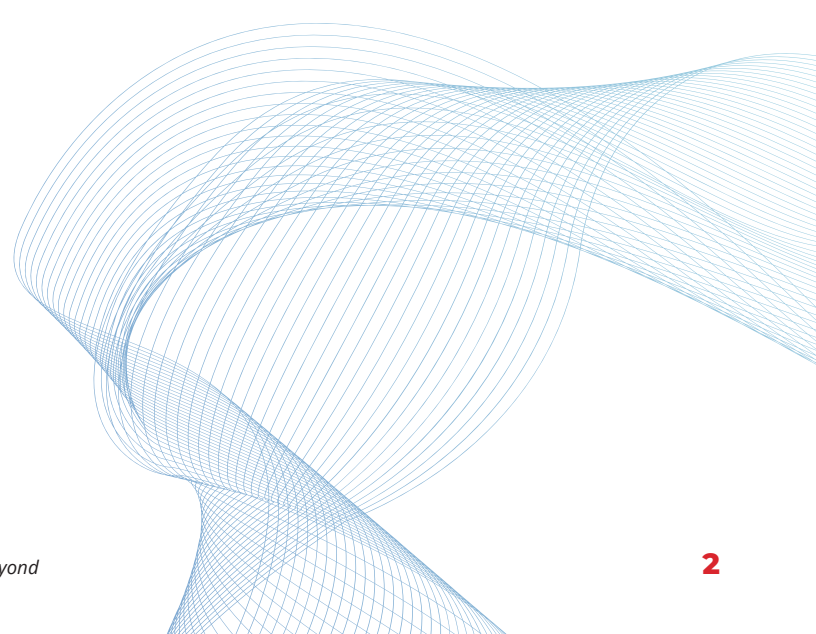
The adoption of virtual learning platforms during the pandemic allowed a smaller cohort of faculty to deliver the curriculum to geographically dispersed students. Going forward, this ability to access curricular content virtually and asynchronously will allow SOMs to:

- Share faculty effort and expertise.
- Provide consistent, best-in-class education.

- Reduce costs.
- Address generational preferences in learning models.

Concurrently, the continued adoption of and improvements in virtual/augmented reality and simulation-based training will provide opportunities for immersive learning experiences, allowing students to practice clinical skills in realistic scenarios.

Innovation isn't limited to technology. Traditional time-based educational models are shifting to a competency-based approach to better align medical education with the skills and knowledge physicians require in real-world healthcare settings, and the medical student-to-resident transition is a major focus of accrediting bodies for both undergraduate and graduate medical education. By emphasizing specific competencies, such as communication, teamwork, and cultural competence, SOMs will better prepare their students to care for complex and diverse patient populations. ►



The future of healthcare also necessitates a greater emphasis on interdisciplinary collaboration, beginning with medical education. Fostering collaborative education with other healthcare disciplines, such as nursing, pharmacy, and social work, will facilitate the development of essential skills in interprofessional communication, teamwork, and shared decision-making.

Educational Imperatives for the SOM of the Future

- **Fully embrace virtual learning platforms.** This will create opportunities for more personalized, student-directed education, as well as access to educational content that supports learners' ability to accelerate or extend the curriculum at their preferred pace. Furthermore, SOMs will adopt more virtual classrooms in the preclinical years, allowing medical students to access educational content regardless of geographic location. This will reduce SOMs' facility requirements and consequently lower the cost burden for the institution and its students.
- **Develop (or seek out) top-of-the-line virtual instructional content.** Best-in-class educational content for fundamental medical knowledge will become commercialized. SOMs will be able to purchase lectures and other didactic content from other SOMs or a learning clearinghouse for online delivery, providing consistent and cutting-edge material for students.
- **Create partnerships to share expertise and capacity.** SOMs will develop medical education consortia to share faculty expertise and staff resources across participating institutions (and potentially other health professions schools), allowing for more effectively utilized faculty teaching complements, increased opportunities for interdisciplinary education, and reduced operating costs for partnering organizations.
- **Reconsider tuition within the economic models.** Tuition already has become a minimal "wedge" in the overall revenue "pie" for most SOMs. With the impact of technology and partnerships on operating costs, more SOMs will move to a reduced or free tuition model to attract the best and brightest students. While the significant financial burden on students will be alleviated, they will still be accountable for the cost of their education, with linkages to residency selection (i.e., specialties in shortage) and future employment commitments with the SOM's partner hospitals and health systems.

RESEARCH: THE THREE-TIERED REALITY

Research has long been an integral component of SOMs, driving scientific advancements, improving

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patient care, and shaping the future of healthcare. However, the landscape of research funding and institutional priorities has shifted and continues to do so, giving rise to a three-tiered reality in SOM-based research.

TIER 1 represents SOMs with abundant access to extramural funding—historically, the top 25 to 30 institutions in the National Institutes of Health (NIH) rankings. These institutions possess resource-intensive basic, clinical, and translational research programs that span multiple disciplines. Tier 1 schools have fewer limitations on the areas of research they can pursue. The financial success of their clinical enterprise and endowment enables them to provide the required institutional support and infrastructure for research.

TIER 2 comprises SOMs with more limited extramural funding but with highly focused scientific endeavors. These schools typically fall within the NIH ranking of 30 through 75 and may rely more heavily on industry funding. Their research programs are often tailored to meet the specific needs of the local, state, or regional community. Institutional investment and infrastructure are strategically concentrated on these identified programs to maximize their impact, with some organizations building research programs around strategic investments in emerging technologies.

TIER 3 includes SOMs with minimal extramural funding, historically falling beyond the NIH ranking of 75. These schools have limited research infrastructure and struggle to meaningfully invest in research programs beyond what is necessary for undergraduate medical education (UME) and graduate medical education (GME). Their primary opportunities lie in clinical trials, population health studies, and other non-resource-intensive research endeavors.

Research Imperatives for the SOM of the Future

- **Carefully evaluate the cost/benefit of being in Tier 1.** Some tier 1 SOMs will intentionally move into tiers 2 and 3, as they recognize that sustaining or increasing their research enterprise at the highest levels may be financially prohibitive. This shift will be driven by increased accountability from university leadership, trustees, state leaders, large donors, and

clinical partners, who seek a clear return on investment (ROI) for the funding provided to the SOM. Consequently, many SOMs will redefine their reputations around the quality of their UME/GME programs and clinical care rather than the expanse of their research enterprise. They will prioritize investing in resources that directly support education and patient care while strategically maintaining research programs that align with the SOM's and the clinical affiliates' missions.

- **Refocus research priorities to a smaller subset of specific fields or themes.** SOMs in tier 2, in particular, will concentrate their resources and efforts on areas of strategic performance. This may include cluster hires to focus on existing research strengths and community needs or investment in emerging technologies that will serve as attractors to potential recruits. Basic sciences will be consolidated into a single academic department, and many SOMs will pivot to further address health disparities, with researchers focusing on social determinants of health and their impact on marginalized communities. These SOMs will formalize research programs with their clinical partners to support their strategic priorities and drive impact to their communities. Outcomes will be the new metric versus the historical funding and publications measurements.
- **Actively seek partnership opportunities to augment and support research programs.** Many SOMs, especially those in tier 3, will seek collaborations that involve sharing or outsourcing research administration services and scientific cores, dually employing/supporting research faculty and staff, and serving as additional locations for evaluating and advancing discoveries from tier 1 and tier 2 institutions. These SOMs may also explore affiliations with external research institutes to serve as the “research enterprise” of the SOM, sharing resources and expertise.

REDEFINING AND SOLIDIFYING ACADEMIC-CLINICAL PARTNERSHIPS

With clinical margins representing the last significant source of funding for SOMs to reinvest in academic programs, the nature of SOM-hospital partnerships has changed. These academic-clinical affiliations will be examined and redefined at an unprecedented pace as these organizations respond to expanding educational requirements, physician workforce shortages, and financial constraints. The pandemic-driven health system margins have disappeared. As such, the clinical affiliates within the AMC now seek to move from transactional, piecemeal financial arrangements to strategically aligned relationships with SOM partners, including joint planning and intentional crossover of leadership roles.

Community-based health systems are increasing their levels of engagement with SOMs (or developing their own) to secure early development and “capture” of the future physician workforce and obtain the academic

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brand as a market differentiator. This also reflects the heightened levels of competition among SOMs in many markets for access to patient care experiences for medical students and other learners as their primary teaching hospitals reach capacity. The successes of the academic and clinical enterprise have become even more intertwined and interdependent, requiring increased levels of mutual clarity, accountability, decision-making, and leadership.

Clinical Partnership Imperatives for the SOM of the Future

- **Expand use of the regional medical campus (RMC) model, including more geographically distant sites.** The number of RMCs will continue to increase, as SOMs and their clinical partners gain greater appreciation of the value of this model. Health systems will cover a sizable portion of the associated educational costs, recognizing that this investment will bring the benefit of a stronger academic brand and a built-in pipeline to their residency programs. Moreover, with pressures to increase class sizes, SOMs will have a “release valve” for required clinical experiences while gaining broader geographic reach and visibility. If SOMs balk at these types of partnerships, health systems will develop their own UME programs, independently or with universities currently without an SOM.
- **Revamp financial arrangements with increased emphasis on shared objectives, risk/reward, and ROI.** Achieving academic objectives will require more investment from clinical partners in the SOM (i.e., mission support), above and beyond payments for purchasing faculty time for patient care and administrative services. The significance of these investments, however, will entail more sophisticated funding approaches that include shared accountability for clinical margins, greater transparency and joint input on how the funding is spent, and demonstrated impact and value for both the academic and clinical enterprises of the AMC.
- **Integrate leadership roles and organizational planning.** Aligning financially with clinical partners will not be enough for SOMs. Key leaders will need to fill

dual roles in both the SOM and health system (e.g., SOM dean serving as health system chief academic officer). This will ensure coordinated decision-making and foster true joint strategic planning across the organizations, particularly in balancing the resource requirements of UME, GME, and research with the clinical enterprise’s workforce needs and financial performance.

THE ROAD AHEAD

The evolving landscape of funding, technology, and generational preferences in learning will shift institutional priorities and drive nontraditional organizational, operating, and economic models in SOMs. Institutions seeking continuous growth across the tripartite mission and being “all things to all people” will shrink in numbers, as many SOMs shift their focus to deliver high-quality education and patient care that aligns strategically and financially with the needs of their clinical affiliate.

The three-tiered reality of research will be exacerbated, as SOMs think less about climbing up the rankings and more about how best to invest their limited resources (and contributions from their clinical partners) in research programs that more directly support their educational requirements and address the needs of their communities. Collaboration and partnership opportunities will play a greater role in promoting efficiency, innovation, and discovery.

“Slow and steady” is no longer a viable approach, even for SOMs that have experienced the highest levels of academic and financial success. Some SOMs are already developing next-level teaching, research, economic, and partnership models, while others are in danger of falling two “generations” behind. The extent to which SOMs recognize and respond to the imperatives described above will determine their success in shaping the next generations of physicians and contributing to scientific advancements and the betterment of healthcare. ■

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