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Feature April 2, 2025

The prescription for America's doctor shortage: Innovative medical school design

by Jennifer Wegner

The United States is facing a serious shortage of doctors. The Association of American Medical Colleges expects a shortfall of up to 64,000 doctors by the end of this year while also projecting a nationwide deficit of up to 86,000 physicians by 2036.[1,2]

Additionally, 35% of doctors say they intend to leave their practice over the next five years, and this startling statistic is not restricted to just those physicians nearing retirement.3 During recent years, there have been reported challenges with fewer graduates entering in-demand specializations as well as bottlenecks in medical graduate-to-residency pipelines.[4,5]

Not having enough physicians entering the profession to meet demand will only worsen the problem. Research has shown that people without a regular family physician rely more on emergency rooms and are more likely to end up hospitalized.[6] In the past year alone, it has been reported that a third of patients have not been able to see a doctor due to availability. Of those who could secure a doctor's appointment, one in five had to wait one to three months to be seen.[7]

In rural areas, these healthcare challenges become even more pronounced. Many states contend with disproportionate physician-to-patient ratios, and residents often face significant barriers to accessing hospital services.8 Additionally, in small towns and rural areas, it is important for physicians to get to know patients in the context of their community and their families. Upon completing medical school, states benefit when they can retain top talent. Studies show that more than half of physicians practice in the same state where they completed their training.[9] Research also shows that medical students who gain experience working in rural areas during their residency programs will likely continue practicing medicine in rural settings.[10]

So, what is the solution to addressing the widespread U.S. healthcare provider shortage?

While popular proposals to increase the number of residency slots and provide financial incentives could help struggling areas attract top talent from neighboring states or abroad, forcing more students into the same number of programs won't move the needle. A more ambitious solution is needed - a new medical school design approach that fosters homegrown doctors and keeps them practicing locally after graduation.

Given that the need for primary care doctors is just one piece of the entire healthcare workforce shortage, to say nothing of the massive shortages of pharmacists, nurses, emergency room technicians, EMTs, and other healthcare professionals, a new lens is required for evaluating the situation. Simply increasing medical student enrollment through new university facilities is not enough. Institutions nationwide have buildings that require modernization to grow and support the training needed to meet today's marketplace realities.

Upgrading medical school infrastructure can help address these workforce challenges by improving training capacity, quality, and distribution of new providers. About half of the country's medical schools were accredited before the 1940s, with another quarter being accredited between 1960 and 1980. Many existing medical schools are still housed in aging buildings, reaching the end of their useful life, and many others erected in the second half of the 20th century are struggling to support technology and space needs. Just modernized facilities and programs alone could better prepare medical students for the demands of today's healthcare system.

However, to encourage top talent to train locally, states can prioritize innovative medical school designs that align with long-term educational and workforce goals. Investing in modern, high-quality facilities enables universities to attract and retain students while strengthening their ability to compete with schools beyond their state.

Having designed numerous medical schools across the country, Page experts have refined an approach to medical education facilities that builds on the success of evidence-based design techniques, incorporating research that helps medical students gain the skills needed to perform at the highest workforce levels.

Today's medical schools require buildings and layouts that facilitate flexible, collaborative learning environments, encouraging students to develop the skills necessary for multidisciplinary small-group work. Additionally, Page knows that many design elements, including advanced technologies and simulation centers, supportive student housing, distributed training sites, and telemedicine-enabled learning hubs, must be considered to maximize the operational efficiency of a medical school design intended to optimize education and clinical skill building.

Research proves that advanced simulation environments can enhance clinical competency, reduce errors, and improve patient outcomes.[11] When intentionally designed collaboration spaces are strategically integrated with leading-edge technology, they create learning environments reflecting interdisciplinary healthcare workplaces requiring team skills.

Thoughtful design also has the power to forge emotional ties. A design that fosters collaboration and connections to the local heritage and communities yields a pipeline of future physicians committed to staying local and serving the community. Research of successful medical schools strategically designed to retain local talent has seen 69 percent in-state retention, benefiting regional families and community economics.[12]

Innovative medical school designs closely resemble real-world clinical environments, promoting interaction and immersing students in scenarios that require collaboration with their peers. This approach teaches them the importance of teamwork in healthcare.[13,14] When these learning spaces effectively mimic actual medical settings, they help students develop a strong sense of place.[15]

Transforming medical education and investing in state-of-the-art facilities are essential steps toward building a robust local workforce and enhancing provider retention. By adopting innovative designs for medical schools, we can effectively address the pressing needs of our communities while establishing these institutions as national leaders in cutting-edge healthcare training. This approach not only benefits the next generation of healthcare professionals but also ensures that our communities receive the high-quality care they deserve.

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