



Innovation and partnership help forge the healthcare workforce of the future

Atrium Health puts forward a bold vision to address staffing shortages with STEM education and careers for the Charlotte community

About Atrium Health

Atrium Health is a nationally recognized leader in shaping health outcomes through innovative research, education and compassionate patient care. In 2022, Atrium Health and Advocate Aurora Health combined to create Advocate Health, the third-largest nonprofit integrated health system in the U.S.

The challenge

The city of Charlotte, North Carolina and its surrounding region are projected to have more than 60,000 open healthcare positions through 2027.¹ Atrium Health recognized this problem was rooted in gaps in education and that it extended far beyond its own network. Exposure to and opportunities for healthcare-focused careers were sorely lacking in the region, particularly among underserved communities.

The opportunity

Within the city of Charlotte is The Pearl, an innovation district that is home to world-leading research, academic excellence, community engagement and diverse entrepreneurial activity. As the sole North American headquarters for IRCAD, The Pearl is becoming a base for innovation and advancement in surgical training with robotics, medical virtual and augmented reality, AI and simulation training. Additionally, The Pearl will include the Siemens Healthineers Experience Center USA, a 60,000-square-foot facility designed to showcase the complete Siemens Healthineers product and service portfolio and provide hands-on equipment demos and training. The entire project, a \$1.5 billion mixed-use development, is situated around the new Wake Forest University School of Medicine campus, the only four-year medical school in Charlotte.

Atrium Health, in collaboration with Siemens Healthineers, is developing an answer to the healthcare professional shortage: a STEM-focused education and training program to leverage the opportunities presented by The Pearl. The partnership also creates substantial opportunities such as job placements.

The hypothetical multiplier effect

If engaging just **35 students** can result in **5-10 STEM professionals** — and **\$5 million to \$10 million** in lifetime economic impact — imagine the possibilities when more than 500 students are engaged each year.

“We cannot accomplish our bold goals alone. I truly believe the future of healthcare will be built on the shoulders of the strongest partnerships done right.”

—**Rasu Shrestha, MD, MBA**, Executive Vice President and Chief Innovation and Commercialization Officer, Advocate Health

The execution

Through the Value Partnership that Atrium Health signed with Siemens Healthineers in 2022, the two organizations came together to create a robust, comprehensive, long-term solution. Leveraging industry-leading expertise and equipment from Siemens Healthineers, they developed curricula for a next-generation, multi-faceted STEM education program. Tactics will include STEM-focused kits to be supplied to students immediately and ultimately, a STEM lab* to be housed within The Pearl. The curricula will address the needs and interests of students from middle school through high school graduation.



A student explores a custom STEM education kit, one of more than 1,000 the program provided in its first year alone.

The program will work in the following way:

- Starting in 2026, Charlotte-area middle school students will be able to begin a “learning about work” program at the STEM lab. The experience will include exposure to healthcare careers in fields such as diagnostics, healthcare sustainability, medtech and biomedical engineering.
- Once in high school, students move through the Hawthorne Academy of Health Sciences, an educational institution newly redesigned to be workforce-aligned and offer embedded pathways in radiologic technology, neurodiagnostics, nursing and healthcare simulation. Additional engagement in surgical technology, AI-enabled healthcare, sustainability, rapid prototyping and biomedical engineering is also available to high schoolers.
- The educational content at every stage reflects the real needs of the healthcare industry and creates potential entry points for graduates into high-demand, high-impact healthcare careers.

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This partnership represents a long-term investment in talent development, workforce readiness and regional economic growth, one that delivers the concrete benefits of helping to close workforce gaps, preparing an industry-aligned workforce and potentially generating millions in economic value for the region.

The future

Thanks to the partners’ ongoing commitment to the effort and the innovative and diverse ways in which the program engages students, the initiative’s original five-year goal of reaching 500 students was met and surpassed in less than a year, even though the STEM lab itself had not yet opened. Demand among students remains high. They are discovering what’s possible in the future and are inspired to gain credentials and experience. And thanks to post-secondary partners, program graduates will be connected to real opportunities in the workforce and meaningful, lasting careers in healthcare.

By 2036, the original student cohort will be entering the workforce, filling high-demand positions. But the program’s positive effects will continue far beyond this milestone. Those effects are expected to include increased high school graduation rates and greater economic mobility for the young people who complete the program. For instance, 150+ STEM graduates annually could create \$150M+ in lifetime economic impact. In short, this STEM engagement isn’t just about filling workforce gaps; it’s also about transforming lives as well as enhancing the vibrancy and viability of an entire region.



Value Partnerships

Value Partnerships with Siemens Healthineers are long-term, performance-driven relationships based on a shared vision of the future of healthcare. These strategic partnerships address the industry’s top challenges by jointly developing innovative, sustainable solutions that enable providers to transform the system of care, generate value and reach their full potential.

[➤ Learn more](#)

The products/features and/or service offerings (here mentioned) are not commercially available in all countries and/or for all modalities. If the services are not marketed in countries due to regulatory or other reasons, the service offering cannot be guaranteed. Please contact your local Siemens Healthineers organization for more details.

The results described herein by customers of Siemens Healthineers were achieved in the customer’s unique setting. Since there is no “typical” hospital and many variables exist (e.g., hospital size, case mix, level of IT adoption), there can be no guarantee that other customers will achieve the same results.

1. “Atrium Health, Charlotte-Mecklenburg Schools Launch Innovative Health Care-Focused High School with Support from Bloomberg.” Atrium Health, 8 Feb. 2024, <https://atriumhealth.org/about-us/newsroom/news/2024/2-february/atrium-health-charlotte-mecklenburg-schools-launch-innovative-health-care-focused-high-school>.

*The STEM Lab is funded, in part, by a generous grant provided by Truist Bank.