



Strengthening diagnostic education for the next generation of physicians

Quest Diagnostics and Hackensack Meridian Health advance a hands-on medical education model designed to improve how future clinicians use laboratory diagnostics.

Quest and Hackensack Meridian Health (HMH) collaborated on an educational initiative designed to address a critical gap in medical training: limited exposure to the clinical laboratory environment.

By combining laboratory expertise with academic instruction, the program aims to equip future physicians with a deeper understanding of diagnostic testing and its role in clinical decision-making.



THE CHALLENGE



A persistent gap in medical education

Laboratory results inform more than 70% of medical decisions.¹ Yet, future physicians have traditionally had very little exposure to the inner workings of a clinical laboratory.²

This creates a significant knowledge gap. While medical students are trained on what tests to order, many enter practice without a full understanding of diagnostic methodologies, quality controls, or test limitations. This can affect interpretation and downstream clinical decision-making.

THE SOLUTION



A hands-on, immersive rotation

To bridge this gap, Quest and HMH introduced an immersive 6-week laboratory rotation at Quest Diagnostics flagship laboratory facility for 160 first-year medical students. Students rotated through core departments like microbiology, hematology, and pathology, learning directly from on-site subject matter experts.

The curriculum provides students with comprehensive exposure to both complex automated systems and routine manual processes, offering a complete view of how laboratory diagnostics support clinical care.

Outcomes and impact: Preparing clinicians to use diagnostics more effectively

The program is already demonstrating meaningful benefits for students, patients, and the broader healthcare community by strengthening clinical decision-making through deeper understanding of how laboratory data is generated and interpreted.

Benefits for future physicians: Students gained direct exposure to the complexity and nuance of laboratory medicine. By understanding how diagnostic results are generated and interpreted, they are better prepared to use laboratory services thoughtfully and integrate testing more effectively into clinical decision-making.

Benefits for patient care: The program supports improved patient care by strengthening physicians' understanding of diagnostic testing. Greater familiarity with laboratory processes can contribute to more informed test selection, clearer interpretation of results, and more efficient clinical workflows.

Benefits for community and health systems: By integrating laboratory immersion into medical education, the initiative helps prepare physicians who may practice within the region while also reinforcing innovative approaches to clinician training.

The program demonstrates how academic institutions and diagnostic organizations can work together to strengthen future healthcare delivery.

BY THE NUMBERS



This initiative demonstrates how laboratory expertise and medical education can align to strengthen physician training—bridging classroom learning with real-world diagnostic practice.

Beyond a single educational rotation, the program establishes a scalable model for integrating laboratory medicine more deeply into physician training.



70%
of medical
decisions are
guided by lab
results¹

160 medical
students were
hosted at the
Quest lab

300K+ tests
processed daily
by the facility

“This collaboration combined the deep clinical expertise from Quest with our educational mission. It’s an innovative model that not only enhanced our students’ education but could potentially improve how future physicians utilize laboratory services—ultimately benefiting patient care and health care efficiency.”

– Dr Stanley Terlecky, Vice Dean of Research and Medical Sciences, HMH School of Medicine



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References

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