

Minnesota addresses laboratory shortages through innovative partnerships

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Clinical laboratories in the United States are in crisis due to workforce shortages, increased laboratory testing needed to sustain patient care, and educational program closures caused by high costs necessary to maintain them.

While many laboratory education programs are closing throughout the nation, like the University of Wisconsin at Madison program that announced their decision to close last week, Minnesota laboratorians are working at increasing capacity and making progress toward solving the critical staffing shortages of medical laboratory technicians/clinical laboratory technicians (MLT/CLT) and clinical lab scientists/medical technologists (CLS/MT).

In the past year since a Department of Labor (DOL) lab grant was awarded to Saint Paul College and its industry and educational partners, their innovative approaches to building and growing capacity in the Minnesota clinical laboratory workforce is being noticed nationwide.

“This is a model program for the nation,” said Jeff Jacobs, vice president of Public Policy, American Society for Clinical Pathology (ASCP). “Minnesota continues to lead the nation in healthcare innovation with this collaborative model program they built for the industry and implemented by a consortium of healthcare partners in industry and education that includes both two and four-year colleges and universities.”

Healthcare Education-Industry Partnership (HEIP), a task force established 10 years ago and spearheaded by Minnesota State Colleges and Universities (MnSCU) to address clinical laboratory workforce shortages, is at last seeing the fruits of its labor. The DOL grant of \$2 million has grown to \$3.2 million through leveraged resources from industry partnerships. Its purpose is to expand enrollment and produce more graduates in the clinical laboratory science profession.

The partners are actively developing a clinical laboratory sciences online curriculum that improves access for interested students, renovating the Saint Paul College MLT lab, expanding and streamlining clinical rotation experiences and developing pipeline opportunities for middle school students, high school students and adults to explore laboratory careers. “A new

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state-of-the art laboratory was built at Winona State University to offer the necessary lab experiences to students as they go into clinical rotations for their clinical lab internships,” said Dr. Judith Loewen, CLS program director, Winona State University.

“This collaboration came together in an unprecedented way,” said Michelle Briski, MLT program director, Saint Paul College. “The DOL grant is acknowledging the need for this innovative pilot program to address clinical laboratory workforce shortages in Minnesota and across the nation.”

The Shortage

Despite starting salaries ranging from \$45,000 to \$50,000, 39% of health care facilities in the Midwest and 44 % nationally are reporting difficulties in hiring lab staff, according to ASCP. Clinical laboratory scientists and technicians provide clinical application and quality patient care by performing tests to help providers diagnose, treat, and monitor the full range of diseases from strep throat to HIV/AIDS to diabetes to cancer.

Projections show an even greater need for laboratory technicians and scientists by 2016 for Minnesota and the nation, according to the Minnesota Department of Employment and Economic Development. Minnesota is expected to have more than 1,000 CLS and 1,000 CLT job openings by 2016, while nationally that number is more than 46,000 CLS and 45,000 CLT job openings.

Further laboratory workforce shortages will occur when approximately 10% of the clinical laboratory professionals reach retirement age within the next 10 to 15 years.

Other factors pressuring the field are the increasing number of tests needed for general patient care, disease control and the maladies of an aging population. Industry experts predict test usage will increase 17% as the population ages.

Another element of the shortage is cost of the programs and the ailing economy. “Hospitals, clinics and laboratories are feeling the affects of budget cuts because they impact the ability to provide clinical rotations to students,” said Rick Panning, vice president for Laboratory Services, Allina Hospital and Clinics. “Universities also are planning to close four-year programs because laboratory programs aren’t cheap. School officials weigh program costs versus tuition and in the short term it may make sense for them to cut costs, but long-term they are going to suffer.”

“Minnesota’s laboratory training program will fill vacant jobs and have a major impact on Minnesota’s shortage of laboratory professionals,” said Barbara McKenna MD, president, American Society for Clinical Pathology. “Jobs associated with the field of laboratory medicine are in high demand across the nation and this pioneering program serves as a model project for laboratory professional educators nationwide.”

Laboratory Careers

Clinical labs are an integral part of health care facilities and more than 70% of the information that a patient receives about treatment and diagnosis comes from the lab. Clinical laboratory professionals work in all areas of the clinical laboratory including blood banking, chemistry, hematology, immunology and microbiology.

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“We are the backbone of medicine,” said Xia Thao, a clinical laboratory technician studying to be a CLS.

“People are taking for granted the need for certified, educated and trained individuals,” said Panning. “Often times the world simplifies what these individuals do. Without certified laboratory professionals in smaller hospitals these institutions would be at risk of being closed.”

Students

Students who receive their degrees, certifications or licenses can expect employment anywhere nationally or internationally. Some working adults are pursuing the field as a second career and the program is aimed at attracting them through an online curriculum and possibly evening classes.

In addition to good starting salaries, “full health benefits, moving and relocation fees are possible. And some employers will pay for college course credits earned at two and four-year colleges,” Loewen said.

Laboratory professionals must possess a number of skills and abilities such as “science and math aptitude, critical thinking ability, dexterity and fine motor skills, composure in a stressful working environment, visual acuity, compassion and ethical responsibility,” said Briski.

Primarily a female dominated industry 10 years ago, more men are choosing the profession. “The DOL grant is also helping Minnesota provide opportunities to immigrants who in turn improve a component of their community,” said Loewen. Dung Vo, recipient of a National Clinical Laboratory Science Scholarship, and his wife, Toanh Ly both pursued a laboratory science career. Toanh completed her MLT degree last year and is employed while her husband, Dung, is completing his final weeks of the program. His next step is to study for his CLS degree. As a clinical laboratory scientist, “I help discover the human body’s mysteriousness and act like a detective tracking down fugitives,” said Vo.

DOL Lab Grant Partners

The lab grant consortium consists of Saint Paul College, which is also the fiscal agent, and other two-year institutions granting MLT/CLT degrees, including North Hennepin Community College, South Central Community and Technical College and Argosy University; four year institutions granting CLS/MT degrees, including Winona State University and the University of Minnesota; healthcare industry partner Allina Hospitals & Clinics; the Centers of Excellence in Healthcare, HealthForce MN and HEIP; and Minneapolis Workforce Centers.