Letters

Coping with Laboratory Workforce Shortages

Thank you for the Forum article by Kaplan and Burgess in February Microbe discussing alarming workforce shortages in the diagnostic laboratories of the United States (Microbe, February 2011, p. 52). The writers are correct—it is critical to improve the visibility of clinical lab careers among teachers, youngsters, and the general public. However, it is disturbing that, were there to be a big influx of potential students, we could not handle them. The laboratory community needs to address the diminished capacity and vibrancy of educational programs, many of which were closed in recent decades.

During a time of constrained opportunities for talented college graduates, universities, clinical labs, government agencies, unions, and professional societies can cooperate to design reinvigorated educational programs for the diagnostic lab profession. A single academic model will no longer serve all areas of the country and all institutions. Considerations such as state licensure (currently in 12 states), availability of training facilities, and laboratory infrastructure demand rigorous and flexible curricula to meet the needs of distinct environments.

Some of the ideas here proposed come from the experience of the Medical Laboratory Sciences Program of Hunter College (CUNY) that has produced more than 1,000 clinical lab scientists in its more than 40-year history. Some key elements:

(i) Flexible academic models. College freshmen with aptitude and interest in biomedical science often lack a clear vision of how their education will evolve into a career path. The common default assumption about medical school frequently falls through without preparation for viable alternatives. Curricula that are based in fundamental science and include rigorous clinical science courses can provide alternatives for a variety of outcomes, including medical lab technology.

(ii) Multiple points of entry. An accelerated pathway designed for students already possessing a baccalaureate degree in science is a provision of the New York State Dept. of Education licensure law for medical technology (http://www.op.nysed.gov/prof/clt/). To consider a career path that requires a graduate certificate rather than a second bachelor’s degree is a significant inducement for students seeking to apply their knowledge in a stable health profession.

(iii) Practical training. Providing expert supervised clinical lab training is likely the biggest barrier to developing new or expanded medical technology educational programming. Laboratories are overburdened and understaffed. However, reaching out to colleagues and creating local networks of lab practitioners, educators, and managers can restore the mutual commitment to participate in career development of young people. To include trainees in the daily life of the laboratory provides a source of qualified and prescreened staff going forward. Like the didactic curriculum, training should be flexible following not only the traditional NCCLS/CLSI model, but designed to articulate with academic models and licensure rules that meet the needs of students and institutions. It is valuable to cast as wide a net as possible, including hospitals, proprietary, reference, and public health labs, providing a range of experience to students, and not putting excess burden on individual institutions.

(iv) Funding and infrastructure. Medical lab education is costly for universities, especially those that have discontinued older programs. However, it is up to us as faculty and health care professionals to educate local academic administrations about the excellent investment associated with serious science students, who typically obtain lasting employment after 4–5 years. Classroom laboratory facilities can be shared among departments if scheduling is flexible.

(v) Career ladders. The lack of avenues for advancement in the biomedical laboratory is a long-recognized disincentive to the professions. This is an opportune time to develop advanced degree programs that build on the rigorous science background of our graduates. Examples are Master’s degrees and Advanced Certificates in management (health care, labs, biotech), public health, biomedical specializations, and emergency management. Ambitious students need to know they will be challenged to move forward in their professions as they make way for others at the bench.

It is an exciting challenge to work within our communities to develop educational pathways for our students, as we provide for the health of their future patients.

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