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Jobs

To deal with the current financial crisis and 10-percent unemployment in the United States, we should band together with our professional colleagues to assist those in need. For those of us who have secure jobs, we are obligated to help by looking for means and mechanisms to help create good jobs within our respective medical professions.

As the professional home for your career, ASCP is dedicated to do just that. We are committed to developing innovative solutions for creating new jobs, as well as showcasing the entire laboratory team.

Moreover, in a world where 75 percent of patients lack access to health care because infrastructure is simply nonexistent, we cannot afford to wait for manna to drop from the sky. It is imperative that we develop alternative solutions.

The current paradox between the national unemployment crisis and the laboratory professional workforce shortage provides an ideal opportunity to promote the laboratory team and recruit talented individuals into well-paid, lifelong vocations. ASCP vows to create a compelling vision for our cause and drive prospective employees into the marketplace by forging tangible solutions.

One recent effort by ASCP is the commitment to action we made at the Clinton Global Initiative (CGI) America Meeting in Chicago, where we joined forces with several New York state universities to develop innovative solutions for creating jobs for laboratory professionals.

Through a recent communications campaign, ASCP will be working with other nongovernmental organizations (NGOs)—predominantly outside health care— to build educational platforms and cutting-edge scientific educational solutions to allow current and future U.S. educational program directors to increase the sizes of their classes without adding new faculty. This partnership includes providing clinical internship sites for more laboratory students without straining educators’ clinical workloads.

Our plan is to provide future students with significantly increased exposure to advanced diagnostics and analytics. Initially, ASCP Immediate Past President John E. Tomaszewski, MD, FASCP, will shepherd the pilot program in the state of New York. Based on the pilot’s success, equivalent programs will follow throughout the United States, particularly in states experiencing major shortages of laboratory professionals and states with programs that are significantly underfunded or poorly staffed.

To accomplish this, however, we need your help. As program directors of medical laboratory programs, as laboratory directors of clinical and anatomic laboratories, and as professionals in clinical settings, please step forward and work with ASCP. Do it for your students, for yourselves, and for the future of the profession.

Finally, I would be remiss if I failed to point out that job shortages are not limited to the United States. At our recent Annual Meeting in Las Vegas, President Bill Clinton and Paul Farmer, MD, PhD, reminded us of our social and ethical responsibility to advance health care worldwide, particularly in resource-limited nations. Your assistance is needed to help build laboratory infrastructure, so patients have access to care.

Opportunities exist through international outreach organizations such as CGI America, Partners In Health, and Global Health Corps, as well current and future ASCP global outreach initiatives. So become part of the solution.

According to Dr. Farmer, the only thing missing is a lack of imagination. So, imagine. Together we can send our profession soaring and provide patients worldwide with access to medical care beyond their dreams. After all, this is why scientists chose this career—to provide quality care for the maximum number of patients each day. At ASCP we are right beside you. After all, we are STRONGER TOGETHER.

Dr. Holladay is Executive Vice President of ASCP.
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Message from the President

Currently within the United States, pathology and laboratory professionals conduct more than four billion tests for patients every year. Each contributes to the understanding of diagnoses and etiology, as well as providing management data for determining prognostic and/or therapeutic plans. Ongoing developments in molecular medicine and cellular engineering and the move toward evidence-based medicine present new and different kinds of job opportunities and an expanded scope of practice. But change can be difficult. ASCP’s focus as a professional society is to help members make the transitions necessary for staying current in a changing job market.

Expanding Opportunity Ahead

Since the mapping of the human genome, the rate of discovery, product development, and clinical adoption of genetically based tests and molecular techniques has greatly accelerated, bringing along the concept of personalized medicine, which allows treatment options tailored to individual patients.

With a greater understanding of the human genome comes new potential for cellular engineering, a new field that looks for ways to manipulate or regenerate living tissue at the cellular level. Digital pathology is another emerging technology with potential for transforming the laboratory. A technology that involves scanning and digitizing slides for viewing on a computer, it makes the examination and long-term storage of medical information easier and less costly, enhances productivity, and makes sharing and long-distance viewing of virtual slides easy.

Personalized medicine and the growing number of genetically based tests will lead to increased testing and, as a result, more demand for pathology and laboratory services. Pathologists and technologists will have to be able...
to understand, evaluate, and utilize genetically based tests and technologies as they emerge. Pathologists, in particular, must support the selection of tests in their laboratories and their judicious use. Informatics specialists will be required who can produce and manage digital slides and oversee the network of electronic health records.

The Knowledge Challenge

Pathology and laboratory medicine have a unique role in the practice of medicine. To maintain this role, pathologists and laboratory professionals share demographic challenges. Each group has an aging population. Since 2000, pathologists have not increased their numbers. Schools for laboratory professionals have decreased in number.

To remedy this conundrum, ASCP is forming a partnership with the Clinton Global Initiative (CGI) America and several New York state universities to expand the capacity of clinical labora-
tory programs in New York. This pilot program is designed to increase the number of graduating laboratory professionals from 230 to 350, representing a boost of approximately 10 percent each year over a five-year period for New York. If it proves successful, ASCP will launch similar programs in other states.

Job creation is crucial throughout the world as well. ASCP is committed to assist with building laboratory infrastructure and training more laboratory professionals worldwide through partnerships with nonprof- its, nongovernmental organizations, and international universities and ministries of health.

For residents, ASCP began development of a new Training Residents in Genomics program. A careful analysis of member needs was performed by using audience response system performance data and survey responses, along with online usage and other information. This analysis helped identify some important professional practice gaps, which the Society is now working to fill.

As part of this endeavor, several other professional organizations were contacted in search of collaborative efforts that would help fill the gaps. This led to an agreement between ASCP and the American Pathology Foundation to develop and deliver pathology laboratory management educational services, which include live education events. Additionally, ASCP agreed to host a Wikipedia site for curriculum content that will be made available to program directors.

**Public Policy Efforts**

Public policy as it affects pathology and laboratory medicine continues to be a priority as well, with particular focus on implementation of the new healthcare reform law, appropriate oversight of laboratory tests, direct access testing, the laboratory professional workforce, and health information technology. Activities this past year included efforts to address ongoing personnel shortages by supporting reauthorization of legislation that would provide financial assistance to two- and four-year laboratory training programs.

On the healthcare reform front, ASCP supported a new “accountable care organization” (ACO) proposal aimed at improving patient care and lowering costs. Recently, ASCP urged the U.S. Centers for Medicare and Medicaid Services (CMS) to incorporate pathologists and laboratory professionals in the ACO model, because we believe CMS is in a unique position to help control costs and ensure better patient care.

While this is only a small sampling of our advocacy efforts on behalf of pathology and laboratory medicine, it is a critically important area of activity. (For more specifics, see the ASCP website at www.ascp.org/Advocacy.) Although we are optimistic about the future, it is important to stay abreast of changes that could adversely affect the profession or the healthcare environment in which pathologists and laboratory professionals practice.

ASCP is on a strong trajectory to support patients, connect with the entire pathology and laboratory community, ensure a certified workforce, and extend the profession’s skills to the international community. If you would like to comment on these or other issues or if you would like to be more involved in supporting your profession through ASCP, please email me at President@ascp.org.

Dr. Alexander is Professor and Vice Chair of Pathology and Residency Program Director at the University of Alabama at Birmingham, Birmingham, Ala.
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Ms. Zaleski

By M. Sue Zaleski, MA, SCT(ASCP)HT

Since April 2009, the U.S. unemployment rate has hovered around 10 percent, the highest in many decades. From 1948 until 2010, the unemployment rate averaged 5.7 percent, with a brief spike in November 1982. Juxtapose this situation with that in the laboratory industry and the irony is apparent: many laboratory jobs remain unfilled because there are too few trained and certified applicants.

Every two years, ASCP conducts wage and vacancy surveys of laboratory personnel. The results of the 2011 vacancy survey, published in the April issue of LabMedicine, are alarming. They show a supply and demand trend that could adversely affect the quality and responsiveness of laboratory services and the delivery of health care.

In 2002, vacancy rates for staff-level medical technologists ranged from 6.0 to 10.2 percent. By 2009, almost half (43 percent) of laboratories reported hiring difficulties. The 2011 survey indicates that vacancies are highest for blood banking (11.6 percent), histology (9.8 percent), chemistry (8.6 percent), hematology (7.0 percent), and microbiology (6.8 percent). ASCP has mobilized its resources to address this problem in numerous ways. (See page 16 for an analysis of ASCP Wage and Vacancy survey results over the past 22 years.)
Creating Awareness, Overcoming the Challenges

Do you remember the slogan for the 2005 National Medical Laboratory Professionals Week (Lab Week), "Laboratory Professionals: The Heart of the Medical Investigation Team"? The statement is quite true, yet recruiting people into every field of laboratory medicine is challenging. Fortunately the TV series "CSI" took the laboratory out of the back room and into the living room, immediately increasing the visibility of the laboratory and giving the profession a “hook” for recruiting students and marketing itself.

ASCP is an active member of the Coordinating Council on the Clinical Laboratory Workforce, a coalition of laboratory organizations and stakeholders, including hospital administrators, educators, policy makers, and human resource professionals. The coalition strives to increase the number of qualified medical laboratory professionals, in part by enhancing their image and raising awareness of their critical role in achieving positive patient outcomes.

The ASCP Career Ambassador Program and the Council of Laboratory Professionals network of Local Representatives share a common goal—increasing public awareness of the laboratory professions. ASCP Career Ambassadors are laboratory professionals newly certified within the past five years who are selected to share their reasons for becoming laboratory professionals. The purpose is to help pre-college students understand and appreciate the contributions of laboratory professionals as members of the healthcare team. To join in this endeavor, apply to become an ambassador at www.ascp.org/ambassador.

Some 135 ASCP Local Representatives give a face to the laboratory profession and provide young people with a personal connection in the community. These volunteers arrange laboratory tours, speak to students and community groups, and promote Lab Week. ASCP members who want to help promote the profession in this way can apply to become Local Representatives at www.asp.org/localreps.

Of course, an individual does not have to be a Career Ambassador or Local Representative to promote the laboratory profession. For example, several ASCP members conducted educational activities at an iSTEM festival on the campus of the State Hygienic Laboratory at the University of Iowa, Iowa City, Iowa. This statewide festival, which was created to stimulate interest among children in the fields of science, technol-
ogy, engineering and mathematics (STEM), featured exhibits and educational and interactive activities aimed at spurring children’s interest in the STEM fields and at introducing them to STEM-related educational and career opportunities in Iowa. The festival attracted about 800 families; more than 200 children “plated” chocolate syrup on jello plates as a hands-on activity about E. coli food poisoning. Career recruitment materials appropriate for all ages were available, including an ASCP comic book (www.ascp.org/LabCareersComic), which was a hit with kids and parents alike.

Now Hiring

Jobs in laboratory medicine are available, but interest in pursuing laboratory careers is hampered by a scarcity of training programs nationwide. Because of funding cuts, about half the nation’s college programs closed between 1970 and 2007, constricting the supply of trained laboratory professionals at a time of high demand. Adding to the irony of high unemployment combined with high laboratory vacancy rates is the 2010–2011 Occupational Handbook from the U.S. Bureau of Labor Statistics, which reports that clinical laboratory science is an attractive career choice because of its good salaries and abundant employment opportunities.

The ASCP Washington, D.C., office advocates government funding of laboratory training programs. The Society submitted written testimony to a U.S. House of Representatives subcommittee requesting reauthorization of the Workforce Investment Act (WIA). An ASCP Action Alert to members generated more than 2,500 letters to legislators pressuring them to reauthorize the act and to offer financial assistance to two- and four-year academic programs that train laboratory professionals. The initial WIA, passed in 1998, awarded Minnesota two grants totaling $5 million. San Jose State University also received grant money to offer laboratory education.

Tipping Point

Supply and demand for laboratory professionals is at a tipping point. ASCP’s goal in directing its efforts, resources, and volunteers toward alleviating laboratory vacancies is to ensure the future supply of laboratory professionals and high-quality laboratory services for patients.

Please email questions or comments to me at MemberChair@ascp.org.

References


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Leadership Messages

Message from the Chair of the Resident Council

By Christopher H. Cogbill, MD

Finding the Ideal Job
I vividly remember the afternoon my acceptance letter to medical school arrived. Along with the acute sense of elation and anticipation about working in the medical field, one of my first thoughts was, “I will never have to work again!” I honestly doubted I would ever feel the discontent that many individuals describe toiling at their jobs. I expected challenges, surely, but I was confident I had found an endlessly fulfilling career.

Unfortunately, my idea of the perfect career quickly eroded soon after beginning a residency in internal medicine years later. I struggled to find equilibrium within a system that tossed me about chaotically, never allowing me the control I craved. I completely lost my sense of bearing. A far cry from the harmonious state I imagined years earlier, I was drowning in my work and was eventually forced to make a drastic career move—resign from my residency program.

**Analyzing the Problem**

What went wrong? As I retrospectively dissect those years, I find that I ignored the most important tenets for making major life decisions. First, I failed to “know thyself.” Objectively comparing my personality and life priorities with a career in internal medicine shows they are incompatible. To the contrary, I spent my years as a medical student creating an idealistic vision of my role within the medical system—a vision based not upon how well my essential characteristics would match but on an illusion.

Second, I did not effectively use my own experiences to guide my career choice. The world of science has fascinated me since my youth, and I absolutely loved my histology and pathology courses in medical school. Discovering how our bodies operate on cellular, molecular, and tissue-based levels has been a hobby ever since I remember opening an encyclopedia. And yet, as I searched to find a compatible medical specialty, I minimized this fact. I liked, but did not love, the core rotations in medical school, which did not include pathology. Instead, I should have placed greater weight on the experiences I most enjoyed, such as learning the pathophysiology of a disease process and seeing it manifested. Only after intently analyzing myself and the experiences that shaped my passion did I make a career choice that both made sense and was sustainable.

**Back to the Present**

I am now completing my last year of residency, working in a specialty I love and planning my fellowship, the last phase of training before my first pathology job. I believe my earlier stumble taught me some invaluable lessons that will help me make better future career choices.

Don’t get me wrong. Like many other residents and fellows, my job hunt will include poring over the latest information on current and future pathology job markets and on what makes a pathologist competitive. I will also diligently protect my online reputation and tighten my Facebook privacy settings. All this is becoming more crucial for getting an extra edge while the job market rides the unpredictable wave created by the current economy. Ironically, the job outlook for pathologists is cautiously optimistic. Many experts predict an impending “retirement cliff” resulting from the retirement of baby-boomer pathologists.

**Resident Survey Results**

Meanwhile, ASCP and the Resident Council endeavor to help residents by providing meaningful data about current trends through the annual ASCP Job Market and Fellowship Survey. One particularly interesting trend is the growing number of residents and fellows choosing two or more fellowships. They cite a contracting job market and demands for more qualified candidates as their reasons. Overall, pathology residents intend to complete an average of 1.4 fellowships.

The 2011 survey also indicates that residents continue to value word-of-mouth, especially networking with faculty, as the top method for finding available job openings. This may seem obvious, but besides using contacts from our respective training programs, I believe it is important to attend local and state society meetings and reach out to potential colleagues and employers at regional and national conferences. That being said, the 2011 survey suggests that pathology residents rate “cold calls” (directly calling and/or writing potential employers) as the second most helpful way to learn about open positions in a tightening job market.

The complex decision making that goes into deciding on a job offer is even more difficult to tease apart. Survey responses indicate that “long-term job security” and the “perception of staff” are the two top factors in job choice, followed by family factors, job availability, career advancement, salary considerations, practice sub-specialty, financial pressures, teaching opportunities, and research opportunities. Despite all the statistics about job selection and job outlook, pathology residents and fellows will make very personal, individualized decisions when selecting their first postgraduate jobs. Based on my own experience, this decision must be personal and individualized to be sustainable and fulfilling.

Even an ideal job will have days that challenge our sanity and cause us to question our career choice. Despite my initial naiveté years ago about “the perfect job,” I still hope to land my ideal job—one that will provide continual fulfillment. I will search not only for a job that looks good on paper, but also a position that most closely fits my passions, life goals, and personality.

I welcome your feedback. Please email questions, comments, or suggestions to me at ResidentCouncil@ascp.org.

Dr. Cogbill is a fourth-year pathology resident at the Medical College of Wisconsin, Milwaukee.
By Edna Garcia, MPH


Analysis Finds Increases in Pay, Demand, and Turnover for Majority of Laboratory Professionals
Medical laboratory professionals play a critical role in health care in the United States. The vast majority of all medical diagnoses are based on laboratory test results. Because these important healthcare practitioners seldom have direct patient contact, however, their critical role in health care often goes unnoticed. Given this lack of public visibility, it is not surprising that prior to 1988, national salary and vacancy data for positions within the medical laboratory were limited.

ASCP recognized a need for data that would expand and confirm the information available from other sources, mainly statistics compiled by the federal government, and hence began administering its Wage and Vacancy Surveys. Thus, for the past 22 years, ASCP has been conducting Wage and Vacancy Surveys of the medical laboratory profession every two years. The purpose of these surveys is to collect the most recent wage data and determine the extent and distribution of shortages within the nation’s clinical laboratory workforce. Over the years, a wealth of information on medical laboratory professionals has been collected through these surveys.

The surveys serve as the primary data source for the U.S. Department of Labor (DOL) and the U.S. Department of Health and Human Services (HHS) in defining the state of the laboratory workforce. Laboratory managers and directors also depend on the surveys to confirm their staff budget assumptions and communicate hiring trends. The ASCP Wage and Vacancy Surveys continue to evolve in response to changes in the profession and practice of laboratory medicine.

Results from these surveys show that laboratory medicine is a rapidly evolving field. To measure the progression or regression of each medical laboratory occupation, as well as to address future challenges in the field, however, a longitudinal analysis is essential. Published data on economic trends in laboratory medicine are few. Furthermore, information on how the field is adapting to changes in the economy, science, and technology over time may not be sufficient to make projections on the future of the profession. By looking at the workforce status of each medical laboratory occupation surveyed from 1988 to 2011, solutions to workforce shortages, inadequate compensation, and challenges to maintaining a steady pipeline of adequately trained laboratory professionals may be explored.

This year, for the first time, ASCP has examined each medical laboratory position from the Wage and Vacancy Surveys to ascertain each position’s development during the 22-year time period. The laboratory positions examined were those surveyed by ASCP from 1988 to 2011: Medical Technologists (MT)/Medical Laboratory Scientists (MLS)/Clinical Laboratory Scientists (CLS); Medical Laboratory Technicians (MLT)/Clinical Laboratory Technicians (CLT); Histotechnologists (HTL); Histotechnicians (HT); Cytotechnologists (CT); and Phlebotomists (PBT). The positions of Laboratory Assistants (LA), Pathologists’ Assistants (PA), and Specialists in Blood Banking (SBB) have been surveyed only since 2005 and therefore are not included in the analysis.

This analysis investigated the wage and vacancy trends for the positions surveyed from 1988 to 2011 in laboratory medicine, and the factors that may have significant effects on each position. It also compared the change in salaries for medical laboratory personnel to those for the overall U.S. workforce. Finally, future challenges and needs were identified for potential solutions. Because the ASCP surveys are administered every two years, the changes in salaries and vacancy rates are examined on a biennial, rather than an annual basis. For comparison, data from the Bureau of Labor Statistics (BLS), U.S. Census Bureau, and Bureau of Economic Analysis (BEA) were examined.

Overall U.S. Employment versus Healthcare Employment

Data from the BLS and BEA show that the most recent recession, which began in 2007, continues to affect the overall national unemployment rate and income. Figure 1 shows that as the unemployment rate continues to rise over time, the national compensation of all U.S. workers has declined. The result is a reduction in the growth of employment and wages nationally. At the same time, employment in the healthcare sector, compared to the nonfarm sector, has grown (Figure 2). Even with the national unemployment rising to 10 percent in October 2009, the healthcare industry has been an economic mainstay by adding jobs at a steady rate.3,4

Figure 1: U.S. economic trends 1980–2010

Figure 2: Total nonfarm and healthcare indexes of employment, seasonally adjusted, 1990–2010
Jobs

There is extensive literature detailing the relationship between economic flux and healthcare employment. Various demographic and economic assessments on physicians, nurses, dentists, and pharmacists—the healthcare professionals that are most publicly visible—have been reported. It is equally important, however, to investigate the impact of economic cycles on the workforce status of the allied health field because, according to the BLS, allied healthcare providers in the United States represent approximately 60 percent of all healthcare providers (Figure 3).

Wage and Vacancy Trends by Position

Medical Technologists (MT)/Medical Laboratory Scientists (MLS)/Clinical Laboratory Scientists (CLS)

Wages. For the most part, salary increases for MT/MLS/CLSs show steady positive growth during the past 22 years (Figure 4). While the annual change in compensation for nonfarm employees5,13 dropped to ~3 percent in 2010, ASCP wage data indicate that staff MT/MLS/CLSs and supervisor MT/MLS/CLSs received salary rate increases of 6.86 percent and 6.23 percent, respectively.

Several factors may account for the sharp increases in salary rates for staff and supervisor MT/MLS/CLSs. First, the increases may be attributable to the aging workforce, who are now the majority of workers in the laboratory and whose earnings are at the higher end of the pay scale. Second, the rise in numbers of baby boomers may have increased the demand for laboratory services, which in turn may have increased the workload for MT/MLS/CLSs, resulting in overtime. Third, increasing employment numbers at hospitals increased the workload for MT/MLS/CLSs, resulting in overtime. The increase in vacancy rates of staff MT/MLS/CLSs may be explained by their higher turnover rates, compared with those for managerial MT/MLS/CLS positions. Moreover, while the United States is currently experiencing a shortage of MT/MLS/CLSs due to declining student enrollments and baby boomer retirements, the current recession may also have slightly changed the employment outlook. It appears that many laboratory professionals are delaying their retirement. Because supervisors tend to be older, on average, than staff, a declining retirement rate may help explain lower vacancy rates among supervisors.

Medical Laboratory Technicians (MLT)/Clinical Laboratory Technicians (CLT)

Wages. Salary rate increases for staff MLT/CLTs peaked in 2000–2003 at 14.0 percent. Since then, the rates have declined to 6.06 percent for 2008–2010. Except for 1990–1992, payment rates for staff MLT/CLTs have stayed within the same range of change as national compensation of U.S. nonfarm employees, which is between 8 percent and −3 percent (Figure 6).

Figure 3: Healthcare practitioners and professionals as of April 2011

Figure 4: MT/MLS/CLS salary rate increases, 1988–2010
Source: ASCP wage and vacancy survey reports.

Vacancies. Vacancy rates for staff MT/MLS/CLSs fluctuated over the time period studied; the rate for 2006–2008 was 10.4 percent (Figure 5). The vacancy rate for supervisor MT/MLS/CLSs, however, started to decline in 2000 and stood at 1.4 percent for 2006–2008. According to the most recent report from the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS), 95 percent of MT/MLS/CLS found jobs within six months after graduation.6

Figure 5: MT/MLS/CLS vacancy rates, 1988–2008
Source: ASCP wage and vacancy survey reports.

The increase in vacancy rates of staff MT/MLS/CLSs may be explained by their higher turnover rates, compared with those for managerial MT/MLS/CLS positions. Moreover, while the United States is currently experiencing a shortage of MT/MLS/CLSs due to declining student enrollments and baby boomer retirements, the current recession may also have slightly changed the employment outlook. It appears that many laboratory professionals are delaying their retirement. Because supervisors tend to be older, on average, than staff, a declining retirement rate may help explain lower vacancy rates among supervisors.

Figure 6: MT/MLS/CLS vacancy rates, 1988–2008
Source: ASCP wage and vacancy survey reports.

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**Figure 6: MLT/CLT salary rate increases, 2008–2010**

*Note: No data are available on supervisor salary rates from 1988 to 2000.*

**Source:** ASCP wage and vacancy survey reports

**Vacancies.** Vacancy rates for staff MLT/CLTs followed the same trend as salary rates. Vacancy rates were at their peak for 2000–2003, at 14.3 percent, but fell to 6.4 percent for 2006–2008 (Figure 7). According to the 2009 findings of the NAACLS Annual Survey of Programs, 90 percent of MLT/CLT graduates found jobs within six months of graduation.¹⁰ NAACLS also reported that 14 percent of MLT/CLT graduates pursued additional education.¹⁰

**Figure 7: MLT/CLT vacancy rates, 1988–2008**

**Source:** ASCP wage and vacancy survey reports

**Histotechnologists (HTL)**

**Wages.** The recessions of 1991, 2001, and 2007 resulted in slight dips in salaries for HTLs. That said, the salary rate increases after every recession show that the profession is able to thrive because its salaries continue to rise above national compensation rates for the period 1988–2010 (Figures 1 and 8). While the compensation of U.S. nonfarm employees continues to drop, with a rate of −3 percent in 2010, ASCP wage data indicate that pay rates for staff HTLs have steadily increased by approximately 9 to 10 percent during the past 10 years (Figure 7).

**Figure 8: HTL salary rate increases, 1988–2010**

**Source:** ASCP wage and vacancy survey reports

**Vacancies.** Vacancy rates for HTLs were at their highest, 22.2 percent, for 1998–2000; they have remained steady, at approximately 7.0 percent, in each administration of the survey since 2008 (Figure 9).

**Figure 9: Staff HTL vacancy rates, 1988–2008**

**Source:** ASCP wage and vacancy survey reports

No data on supervisor vacancy rates from 2000 to 2005 are available. In addition, the sample size of supervisors who responded to the 2008–2010 wage survey and to the 1988–2008 vacancy survey was insufficient to allow for statistically significant comparisons. Overall, the wage and vacancy outlooks for HTLs are positive, with increasing rates of pay and steady demand in the job market. NAACLS has reported that 100 percent of the HTL program graduates found a job within six months of graduation.¹⁰

**Histotechnicians (HT)**

**Wages.** Salary rate increases for HTs fluctuated in the period 1988–2005. However, the rate increases for staff HTs during the past five years continue to show an upswing, with a rate increase of 12.05 percent for 2008–2010. HT salaries have outpaced the change in compensation for U.S. nonfarm employees during the past 22 years. Similar to salary rate increases for staff HTLs, those for HTs experienced slight dips
during recessions, but they too have been able to pick up after each economic downturn (Figure 10). Conversely, HT supervisors’ pay rate increases have continued to decline since 2003, falling from 15.29 percent in 2003 to 5.9 percent in 2010.

Figure 10: HT Salary rate increases, 1988–2010
Source: ASCP wage and vacancy survey reports

Vacancies. Vacancy rates for HTs followed the same trend as salary rate increases, with staff HTs at 8 percent for 2006–2008 and supervisor HTs at 4.1 percent (Figure 11). NAACLS reported a 95-percent employment rate six months after graduating from an HT program.10

Figure 11: HT vacancy rates, 1988–2010
Source: ASCP wage and vacancy survey reports.

Cytotechnologists (CT)

Wages. Staff CT salary rate increases experienced an upswing from 1994 to 2003. Since then, the rate of increase in wages has slowed, to 5.52 percent for 2008–2010. Supervisor CT salary rate increases also experienced growth until 2005, when they slowed to 5.9 percent. In 2010, pay rate increases for supervisor CTs dramatically slowed to an average of 0.15 percent (Figure 12).

Figure 12: CT salary rate increases, 1988–2010
Source: ASCP wage and vacancy survey reports.

Vacancies. Vacancy rates for staff CTs fluctuated over the 1988–2008 period, with a 4.8-percent rate for 2006–2008. Vacancy rates for supervisor CTs have continued to decline since 1992 (Figure 13).

Figure 13: CT vacancy rates, 1988–2008
Source: ASCP wage and vacancy survey reports.

While it appears that wages and vacancies for medical laboratory professionals are declining, the increasing demand for laboratory professionals to perform genetic testing in the molecular diagnostics realm poses excellent opportunities for CTs.11 According to the National Institutes of Health, “genetic testing will be an important part of health care for many individuals in the future.” Today, there are more than 2,000 genetic tests available for over 2,000 rare and common conditions.12 CTs will be excellent candidates for performing molecular diagnostics because of their ability to “combine existing morphology skills with molecular techniques.”13 Changes in the field of CTs may also be addressed by strengthening the relationship between cytotechnologists and pathologists.
Phlebotomists (PBT)

**Wages.** In 2010, the salary increase for staff PBTs was, on average, 1.93 percent, its lowest rate in the past 16 years (Figure 14).

![Figure 14: PBT salary rate increases, 1988–2010](image)

*Note: No data are available on supervisor salary rates from 1988 to 2003.*

*Source: ASCP wage and vacancy survey reports.*

**Vacancies.** In 2008, the vacancy rate for staff PBTs averaged 2.95 percent, the lowest rate in the past 20 years (Figure 15). No data are available on salary and vacancy rates for supervisor PBTs from 1988 to 2003 and from 1988 to 2000, respectively.

![Figure 15: PBT vacancy rates, 1988–2010](image)

*Note: No data are available on supervisor salary rates from 1988 to 2003.*

*Source: ASCP wage and vacancy survey reports.*

According to the 2008 ASCP Wage and Vacancy Survey, staff PBTs have the highest turnover rate at 27 percent. The high rate of turnover for PBTs may be due to staff leaving the field to pursue higher education or other occupations in the laboratory field.

Factors Considered to Influence Wages and Vacancies

**Recession**

Throughout the past 20 years, the National Bureau of Economic Research (NBER) has acknowledged three “official recessions” that had significant impacts on the U.S. economy. The first one was in the early 1990s; the second, in 2001; and the most recent one, which began in December 2007, is described as “by far the most extensive contraction since the Great Depression.” The change in the compensation for U.S. nonfarm employees fluctuated from 6.2 percent in 1990 to −3 percent in 2010 (Figure 1).

Results of the ASCP Wage and Vacancy Surveys from 1988 to 2010 show that, for the most part, the change in salaries of laboratory personnel is exceeding the change in salaries for U.S. nonfarm employees (Table 1). Comparison of the ASCP wage rate data with inflation rates also shows that increases in wages for all laboratory professionals are making gains over inflation (Table 1). These data suggest that, overall, laboratory salaries have remained relatively stable compared to those of other workforce sectors in the United States in times of fiscal crisis.

<table>
<thead>
<tr>
<th>Year</th>
<th>U.S. Inflation Rates</th>
<th>Change in National Compensation for all U.S. Employees</th>
<th>Change in Compensation for Medical Laboratory Personnel Surveyed by ASCP</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990</td>
<td>4.08%</td>
<td>6.2%</td>
<td>7.8%</td>
</tr>
<tr>
<td>2010</td>
<td>1.64%</td>
<td>−3%</td>
<td>4.34%</td>
</tr>
</tbody>
</table>

Table 1: Inflation rates and medical laboratory personnel salary increases versus change in national compensation for all U.S. employees

**Aging Population**

According to the BLS, the oldest baby boomers reached age 62 in 2008. The assumption that retiring baby boomers will lead to an increase in vacancies for younger workers has not happened yet. Variations in the labor market have shifted the normal assumptions. BLS reports that “as older workers gain more experience and accumulate more skills, their marketability rises, resulting in longer job tenure and, ultimately, lower unemployment rates than young workers.”

According to a report published by the Robert Wood Johnson Foundation, the economic downturn has “created pressure on healthcare professionals to revise their career and retirement plans.” Nurses have been reported delaying their retirement, and a growing number of retired nurses are trying to go back to work.

Reports on the retirement of medical laboratory professionals, on the other hand, state that a large number of experienced personnel are leaving due to retirement. Moreover, the ASCP 2011 Vacancy Survey indicates that 5.98 to 17.9
percent of laboratory professionals from various laboratory departments surveyed are planning to retire in the next five years. Reports from the Robert Wood Johnson Foundation predict that demands for laboratory tests due to the aging population will continue to increase in the coming years,\(^1\) and this will drive the need for more skilled laboratory personnel in the near future.

**Innovations in Science and Technology**

Advances in automated technology are redefining the workforce skills necessary to meet the demands of tomorrow’s laboratory. For instance, experts believe that automation is shaping laboratory workers into “knowledge” workers.\(^1\)\(^8\) Automation allows laboratory personnel to delve into areas of specialty that have not yet been automated. While robotics and automation may help narrow the gaps in existing medical laboratory shortages, they have not reduced the need for laboratory professionals, MT/MLS/CLSs in particular. Furthermore, these advances do not apply to laboratories in rural areas. Rural hospital and physicians’ offices have the highest vacancy rates and the least automation.\(^1\)\(^8\)

The growing demand for medical care due to an aging population has encouraged advances in medical technology.\(^1\)\(^5\) The explosion of new laboratory tests—molecular diagnostics, genomic sequencing—may change the job requirements of some laboratory professionals. For instance, advances in knowledge of the pathogenesis of cervical cancer, the development of HPV vaccines, and changing clinical guidelines regarding the frequency of Pap tests may be changing the field of cytotechnology.\(^1\)\(^9\)

**Laboratory Workforce Issues**

Program closures due to budget cuts affect potential students, particularly in rural areas. Decreasing enrollments also have profound influence on the laboratory workforce shortage. According to NAACLS, as the country experiences severe economic decline, “high quality medical laboratory science programs have been targeted for elimination.”\(^7\)\(^0\) Furthermore, the nation’s clinical laboratories continue to be plagued by challenges in recruiting and retaining staff. In 2003, at least 42 percent of laboratories surveyed by ASCP reported offering recruitment and retention bonuses. Currently, that rate is approximately 20 percent. Planning a systematic strategy to address these issues is essential for the field of laboratory medicine to continue to thrive and for the nation to meet its staffing needs for laboratory professionals.\(^9\)

**Conclusion**

Within the 22-year period of the ASCP Wage and Vacancy Surveys, data indicate that compared to the U.S. nonfarm sector, the field of laboratory medicine has remained stable even with major economic downturns. There has been a steady increase in rates of pay for staff and supervisor MT/MLS/CLSs, as well as for staff HTLs and HTs, since 2005. In addition, there is an upward trend in the demand for staff MT/MLS/CLSs, while the demand for staff MLT/CLT, HTL, CT, and PBT has remained steady since 2005.

As the healthcare industry continues to “serve as a beacon of job opportunities,” so does the field of laboratory medicine.\(^2\)\(^1\) According to BLS, “excellent job opportunities are expected” for clinical laboratory technologists and technicians.\(^2\)\(^3\) Medical Technologists are ranked No. 30 and Medical Laboratory Technicians No. 35 on the Top 100 Jobs of 2011.\(^2\)\(^3\) Increases in testing volume due to advances in genomics, a growing population, and the development of new types of tests will push the profession into higher demand. Employment in this field is expected to grow at 14 percent (45,600 new positions) between 2008 and 2018.\(^2\)\(^2\)

The nation’s aging population, the increasing demand for medical care, and the continuing effects of the recession will become challenges for the United States during the 2008–2018 period based on BLS employment projections.\(^1\)\(^5\) With the national unemployment rate holding steady at 9.1
percent, it appears that the economic climate will remain such that the U.S. labor market will experience: (1) Increased numbers of individuals who are unemployed due to job loss; (2) A greater number of persons employed part-time for economic reasons; and (3) Young workers being more affected by poor labor market conditions than workers age 55 and older. 4,16

Analysis of the profession as a whole indicates a discipline that continues to progress. While the job outlook for laboratory medicine personnel is promising, additional challenges are facing the profession in the future. Each position in the profession has unique issues that need to be addressed. For instance, what is causing the high turnover rates of staff MT/MLS/CLSs and staff PBTS? How will the advent of automation and decrease in Pap test volumes affect MT/MLS/CLSs and CTs, respectively? This analysis of the fluctuations in wage and vacancies has shown how each position has adapted during changes in economic climates and scientific breakthroughs. The lingering issues of each position need to be confronted for the profession to successfully move forward.

References


Ms. Garcia is the ASCP Research Associate in Washington, D.C.
For laboratory professionals who want to take advantage of career opportunities, what’s the most effective way to move up? Certainly, there’s no denying that expertise, professionalism, and a good work ethic can be attractive traits for candidates. In addition, many resources are available to help individuals write an effective cover letter and resume. But there are also specific career development activities that upwardly mobile laboratory professionals can take, such as using the ASCP certification and qualification process to get their resumes into the “review” stack instead of the “discard” stack for a hiring manager.

The latest ASCP vacancy survey shows that “supervisors are more likely to be certified than staff.” This suggests that employers consider certification a desirable qualification when hiring or promoting laboratory staff. Thus, individuals may find that certification and/or qualification increases the likelihood of advancing into managerial or supervisory roles within the laboratory.1

**ASCP Certifications**

**Open Doors to a Brighter Future**

For those with technician certifications, the step up to technologist classification can be rewarding from a career standpoint. While some laboratories follow Clinical Laboratory Improvement Amendments (CLIA) requirements to enable laboratory technicians to perform high-complexity testing, many have stricter requirements for a bachelor’s degree and/or technologist certification. Some hospitals hire personnel in a “registry-eligible” classification, requiring technologist certification within a specified period of time.

Medical Laboratory Technician (MLT) to Medical Laboratory Scientist (MLS) programs are starting to appear in many areas of the country. There were 2,352 MLT examinees in 2009 compared to 3,960 in 2010. With the current and expected continuing shortage of MLS personnel, this route may be attractive to MLTs wishing to increase their career earnings and professional scope. Or MLTs may wish to consider categorical certification (discussed below).
Histotechnicians who are able to complete their bachelor’s degrees can apply for certification as a Histotechnologist, to provide a similar upward career move.

Other Technician Certifications

For phlebotomists, obtaining the credential of Certified Phlebotomy Technician can help broaden job opportunities. Of the many thousands of individuals collecting specimens in the United States today, only a small percentage have certification; 2,382 took the ASCP examination in 2009, compared to 3,203 in 2010. Some states require certification as a condition for licensure for blood collection.

The Donor Phlebotomy Technician (DPT) certification can demonstrate competency in screening for blood and component collection, as well as technical practices in the donation process. This certification would be a distinguishing qualification for blood and component donor centers, as well as hospitals that have donation centers.

Generalist and Categorical Certifications

Histotechnologist (HTL), Cytotechnologist (CT), and MLS certifications are usually considered the standard for hospital laboratories, while some laboratories also use technicians for many duties.

An ASCP Local Representative Carlo J. Ledesma, SH(ASCP)CM,MT(ASCP), serves as a Laboratory Shift Supervisor at Norman Regional Hospital, Norman, Okla. His training, experience, and ASCP certifications have helped him to specialize in hematology and make the transition to a management position.
For those who have bachelor’s degrees in science and are interested in getting into the field in a narrower capacity, the categorical certifications (blood bank, chemistry, hematology, and microbiology) can prove of value. Focus in a specific topic can be an effective way to move to technologist-level certification. While many hospitals employ generalists throughout the laboratory, larger hospitals and commercial laboratories tend to hire department-specific staff who can specialize in a particular area and provide expertise.

Two emerging fields are cytogenetics and molecular biology, and certifications are available in both areas. Approximately 325 individuals took each of these examinations in 2010. Both cytogenetics and molecular biology are rapidly growing areas of laboratory interest.

Specialist Certifications

Six specialty certifications are available. Five of these certifications are in the traditional areas of blood banking, chemistry, hematology, microbiology and cytotechnology. For anyone considering promotional opportunities in the laboratory, these certifications make it clear that an individual has mastery in the selected technical area. There are many eligibility routes to obtain these specialties. Those needing experience not available at their current workplace may be able to make arrangements with other nearby institutions to gain the needed skills before taking the examination.

For those with an interest in career development in anatomic pathology, the Pathologists’ Assistant certification requires a bachelor’s degree and pathologists’ assistant internship.

International Certifications

More than 3,990 applications for international certifications had been received from 68 countries as of Oct. 15, 2011, and over 2,000 ASCP certifications had been granted as of October 2011. The ASCP Board of Certification (BOC) continues to build relationships in South America, with plans to attend international meetings in Brazil, Peru, Ecuador, and Colombia.

International certifications currently available include: MT(ASCP), approved for California licensure and available in Spanish; MLT(ASCP); MB(ASCP); PBT(ASCP), and CTgyn(ASCP). On the horizon are the certifications for CT(ASCP), C(ASCP), and M(ASCP). About 3,500 examinations have been administered worldwide.

Diplomate in Laboratory Management

This certification is open to all laboratory professionals. There are six different routes to qualify to sit for the examination, so there is plenty of opportunity for individuals with diverse backgrounds. This certification is a great differentiator for those seeking promotion to manager- or director-level positions, because it demonstrates competency in many areas of laboratory administration. Only 953 individuals have received their Diplomate in Laboratory Management (DLM) since its inception in 1989. Many of these individuals will be retiring the in the next 10 years and will need to be replaced. This is an eye-catching certification that differentiates applicants from those without advanced credentials.

Qualifications

In addition to certification there is also qualification. Laboratory professionals may not be aware of another category of recognition available to them. A qualification recognizes specific skills in a technical area.

For example, Florida recognizes those individuals certified and qualified as HT(ASCP)QIHC toward meeting the specialist licensure requirements for histology. Qualifications are available for the following areas: Qualification in Cytometry (QCYM); Qualification in Immunohistochemistry (QIHC); Qualification in Laboratory Informatics (QLI); and Qualification in Laboratory Safety (QLS). To receive these credentials, individuals must meet the eligibility requirements and successfully complete an examination, in QCYM, QIHC and QLS, respectively, or a work sample project in QLI. It is open to MLT and HT technician-level applicants, as well as technologist and specialist applicants.

When you consider advancement and professional development, one of the most effective ways of demonstrating your readiness for a broader set of responsibilities is to obtain the appropriate certification and/or qualification for your next career move.

The recent ASCP Wage Survey concludes that, “Where the data allowed for comparisons between certification, wages tend to be higher for certified laboratory personnel regardless of position type or level. This differential was most noticeable for staff level laboratory personnel, ranging from at least 10 percent more for medical technologists and medical laboratory technicians to as much as 14.3 percent more for histotechnicians.”

Complete descriptions of examinations, eligibility routes, application information, examination content, and study references are given at the ASCP BOC website, www.ascp.org/certification. If you have not already investigated certification as a career-enhancing move, you have a great opportunity to use these credentials to boost your professional development and promotional potential.

References


Dr. Becan-McBride serves as the Director of Workforce and Resource Development at The University of Texas Health Science Center, Houston, and a Professor in Family and Community Medicine. Dr. Johnson is an Administrator at the MacDill Clinic, Tampa, Fla. Ms. Kozlowski is Senior Consultant for Lean Healthcare Solutions at TechSolve, Inc.
In July 2011, the Accreditation Council for Graduate Medical Education (ACGME) published new guidelines for duty hours and supervision. These guidelines were based on an extended examination of residency training and its impact on resident fatigue and performance. New guidelines include limitations on the number of hours a first-year resident can work (16 hours maximum) and no in-house call for first-year residents. In addition, supervision lines are more clearly defined.

Residents in pathology may select several “tracks,” which include anatomical pathology/clinical pathology (four years), anatomical pathology or clinical pathology only (three years), and anatomical pathology/neuropathology (two years anatomical pathology, two years neuropathology). These tracks have been affected differently by the lack of call experiences for first-year residents. However, redefined rotations and supervision requirements have been suggested through frequently
asked questions on the ACGME website. Most recently, ACGME has proposed its next accreditation system, which will include frequent reporting of data by programs but less frequent “on-the-ground” site visits of programs. The next accreditation system will allow programs to focus on improvement, rather than on the “one-time snapshot” of their training endeavors. Programs will provide annual data that will be reviewed by the committee, rather like a College of American Pathologists self-inspection with site visits happening at eight- to 10-year intervals.

The resident survey has been reformatted and, with the surveys from two previous years, can be used more effectively by the review committees as an important component of a program’s “health.” However, the resident survey is also used in monitoring duty hours compliance. These results may alter a program’s site visit length and perhaps stimulate an early site visit.

**Defined Knowledge and Skills**

The Milestones Project is an extension of the Competency model and will assist programs and residents to determine progress based on specifically defined knowledge and skills acquired during training through assessment. The Pathology Working Group met for
the first time Oct. 27–28, 2011, and began the tough task of developing these very important tools.

The Milestones Project will begin with a resident’s skills necessary to start training, based on what is expected of a graduating medical student entering pathology. In addition, it will attempt to define features that can be measured five years after the completion of training in the board-certified pathologist who participates in the maintenance of certification (MOC) process. The points in between will be defined using the six general competencies to determine resident progress through training. It is important to emphasize that these five points are not necessarily based on the yearly level of resident training, and are often gained as points during a rotation, such as hematopathology or blood banking (which are typically three-month rotations) or for short elective rotations of two weeks to one month duration.

The Working Group will meet once or twice more prior to the program directors’ meeting at the United States & Canadian Academy of Pathology and the Association of Pathology Chairs/Program Directors (PRODS) meeting in summer 2012. There will be efforts made to obtain feedback throughout the process prior to the implementation of the New Accreditation System in 2013 and 2014.

Finally, ACGME conducted a recent survey of Designated Institutional Officials (DIOs), or GME “deans,” regarding the impact of potential funding cuts to graduate medical education by the federal government. The survey results were posted and show that a very significant cut in programs and training slots will result in a 33-percent to 50-percent cut in funding. In fact, many institutions would drastically cut or even eliminate most subspecialty (fellowship) positions and even cut core residency positions at the 50-percent funding reduction level. These funding cuts would significantly affect the long-term workforce in all specialties.

By approximately mid-2016 to 2017, predictions are that there would not be enough funding to support the graduates of allopathic medical schools in training programs. If undertaken, these drastic measures would effectively eliminate international graduates and osteopathic medical graduates from ACGME training programs. With the recognized need for additional physicians to care for our aging population, these are indeed sobering figures.

During the past year, several pathology programs have closed, possibly due to a shift in funding from pathology and other specialties towards primary care. Will the loss of governmental support for graduate medical education further erode funding for pathology programs? Creative approaches to funding of graduate medical education will be necessary and may include philanthropic support and tuition, as well as allowing subspecialty residents and fellows who are licensed and boarded physicians to “bill for service” while training.

Overall, there are many changes facing medicine today and pathology in particular. It is really impossible to predict the needs of the workforce, but pathologists do know that as the population ages, so do the providers! Now the average age of a pathologist is approximately 55.

With new technologies, information technology needs, and digital pathology, pathologists are as necessary as ever, perhaps more so. The future may be uncertain, but it is not limited. Many different types of positions will be created to provide the excellent quality of pathologists to serve our growing population. Seven billion people live in the world, and pathologists are an integral part of the healthcare team around the world.

Dr. Powell is Professor of Pathology, Vice-Chair for Education, Chief of Neuropathology, Director of Pathology Residency Program, and Co-Director of TMH/M.D. Anderson Neuropathology Fellowship Program at The Methodist Hospital, Department of Pathology, Houston.
Rigorous Preparation Is Key to Finding the Right Pathology Position
This article is based on Dr. Horowitz’s presentation on Oct. 21 at the 2011 ASCP Annual Meeting/World Association of Societies of Pathology and Laboratory Medicine XXVI World Congress, Las Vegas.

Most newly minted pathologists look for a job in a community pathology practice. To be successful in that search, they need to be prepared and have realistic expectations.

First, pathologists need to know what will be expected of them. In order of importance, the following are essential for success in community practice. Foremost is accurate surgical pathology diagnosis. Second are superior interpersonal and communication skills. Next are the skills of rapid and accurate intra-operative consultation, knowledge of clinical medicine, and the ability to use the laboratory to solve clinical problems. Finally, adequate workload and turnaround time, knowledge of molecular pathology, quality assurance, and laboratory management are expected.1,2

New pathologists should also know what criteria will be used to judge them. They will be evaluated on their interpersonal and communication skills during the interview; on the reputation of their residency or fellowship; on the recommendation of their program director; on any additional training, experience, or certification; and on other personal recommendations.

Finding Jobs

Where are the jobs? Pathologists’ residency faculty is the first resource because when a community pathology practice has a vacancy, it usually calls the program director or chair of the local training program and asks whether there are any graduates who could meet their needs.

If new pathologists already know where they want to practice, they should contact the pathology group early on, expressing their interest and availability in a year or two. Networking at local and national pathology events is very useful. Online listings (CAP Online Career Center, www.pathologyoutlines.com/jobs.html, www.pathologyjobstoday.org, and www.pathcareer.com) and journal advertisements are also valuable sources. Mass mailings rarely work.
Winning Hearts and Minds

The first contact with a potential employer is usually a letter and accompanying curriculum vitae. This first impression must be flawless. Format, grammar, and spelling must be perfect. The letter should be short, less than one page; it should be personalized to the addressee and specific about the job. If the program director referred the new pathologist to the group, that referral should be mentioned. The letter should succinctly state why he or she is interested in, and particularly suited for, that specific position and why he or she is drawn to that community, hospital, or group.

If the new pathologist's letter is successful, she or he will be asked to come to an interview. This will be the opportunity to prove that she or he is the best person for the job! The key is to make a better impression and give better answers than anyone else. Communication and interpersonal skills are the most decisive elements in the hiring process. Not only verbal skills but also nonverbal communication are critical—the candidate's appearance and clothing, demeanor, body language, and voice all together will determine how he or she will be received.

In addition, new pathologists need to anticipate likely questions, develop excellent answers, and practice those answers. (See sidebar to the left.) Pathologists must be ready to sell themselves, their special expertise, and what they can bring to the practice. Don't hesitate to ask questions about the community, the hospital, the group, and the position. When the interview is over, review the discussion and clarify expectations, such as who will contact whom? When? Are further interviews or information needed? Be sure to send an immediate thank you note to each person who interviewed the job candidate.

Sizing Up Prospective Employers

The decision about a job should be based on a thorough evaluation of the position offered and also on the community, the hospital, and the group. New pathologists must appraise the community, its size, demographics, geography, and climate. How are the local economy, cost of living, and taxes, and what is the availability of schools and recreational and cultural facilities? What is the cost of real estate, the proximity of (and commuting time between) residential areas and the job? Finally, how does the spouse or partner feel about the community? Are friends and family nearby? What are the job opportunities for the spouse?

New pathologists must assess the hospital. What is its mission? What is the ownership and governance? Is it part of a for-profit chain? What is the hospital's financial health and occupancy? What is the makeup of the medical staff, mainly primary care or specialists? Are there unique services such as transplantation, a neonatal intensive care unit, and a cancer center? Are there other competing hospitals in the commu-
nity? Is the hospital affiliated with a medical school? What training programs are there—residencies, nursing, medical technology?

New pathologists will be spending 50-plus hours per week with their colleagues in the pathology group, so they need to learn a lot about them. How long has the group been with the hospital? Does it cover other hospitals? What contracts does the group have with hospitals and with managed care organizations? Does the group have an independent laboratory? How is the group organized? What is the group’s track record with associates? What is the group’s reputation in the hospital, in the community? What are the degree of sophistication and the range of expertise of the potential colleagues? How do they seem to get along? Some of this information may be difficult to obtain. New pathologists might try speaking to doctors in the community or former employees of the group. If they find that information is guarded or not available, they should be wary.

How should new pathologists evaluate a job offer? First, review the CAP Professional Relations Manual and be sure to have an attorney review the offer, which should be in writing in the form of a contract or letter agreement. The offer should contain the following: the term or length of the agreement; a clear definition of duties and responsibilities; frequency of “call”; teaching, research, and other expectations; share of autopsies, surgical pathology, and circuit riding, for example; and outside work. What is allowed, and what is forbidden? What office space, equipment, supplies, and administrative support will be provided? What will be the starting salary? Pay after one year? Two years? Is pay related to responsibility and workload? Are there incentives or bonuses? What insurance will be provided or required, including malpractice, public liability, health, term life, and disability? How much vacation is offered? Is time allowed for sick leave and going to meetings? Are there other benefits such as payment for books, journals, association dues, and travel? What about moving or relocation expenses? How can the contract be terminated? Is there a no-compete clause?

Being prepared and informed inevitably leads new pathologists to the right choice. Best wishes for a successful and rewarding career.

References


Dr. Horowitz is Clinical Professor of Pathology, Keck School of Medicine, University of Southern California, Los Angeles.
The landscape of healthcare delivery is continually changing, more so today than perhaps any time in the past. Physicians and other healthcare personnel are on the cusp of changes that are molding new delivery systems and coordinated patient care models. This is a time of great social and economic uncertainty but also of great possibilities for those willing to adapt their roles accordingly.

This is certainly the case for the pathologists who lead their laboratories as medical directors. Although the core set of roles and responsibilities has not changed, the opportunities to deploy those skills are evolving. Pathologists in these roles have the opportunity to demonstrate a new value proposition to their clinical colleagues and to their patients.

The overarching roles and responsibilities of the laboratory medical director are to provide effective leadership in medical care and service to the patient, to educate other colleagues and staff, and to effectively administer the operation of their service unit. Built on an essential foundation of competent clinical skills, success in this role demands effective leadership skills. Though, perhaps, charismatic “leaders are born, not made,” more often leaders and leadership skills are forged through commitment to skills development, hard work, and response to challenges and adversities. Whether born or made, Walter Lippmann said, “The final test of a leader is that he leaves behind him in other men the conviction and the will to carry on.”

**Effective Leaders**

Successful leaders embody a broad range of skill sets and attributes. They are men and women who have demonstrated that they act with integrity, perform responsibly, and have the courage of their convictions. They hold themselves and others accountable for excellence. They are able to engender the trust of others, especially those whom they lead.

Since leadership often requires making difficult decisions that affect others, effective leaders know how to treat others with compassion. They know how to create effective teams, to surround themselves with the right people for the right jobs,
and to recruit team members who are smarter or more skilled than they are. They admit their mistakes, continually improve themselves and their organizations, and help others to change.

Effective leaders are skilled communicators who know how to be good listeners. They are able to convincingly articulate their goals and vision to those who follow them. They recognize the value in others and reward them for their efforts, not just correct and discipline them when they err.

Leaders must support the members of their team, guide them through difficult waters, and give direction to their efforts. Mentorship, coaching, and helping others to develop to their own potential is an invaluable skill and an important foundation for effective succession planning. This is missing from many organizations, especially in health care.

There are many common mistakes that leaders make. These include having an uncaring attitude, lacking personal character, showing favoritism, and lacking vision. In addition, an avoidance of difficult situations, conflicts, and decisions, as well as failing to focus on accountability, plagues many leaders rendering them less effective. All of these failings are accentuated by leaders who suffer from poor communication and interpersonal skills.

**Medical Thought Leaders**

Medical leadership requires excellence in medical, educational, and administrative functions. Effective medical leaders must be able to ensure a competent, well-trained healthcare team, integrate science and technology appropriately, provide for improvements in knowledge, and influence other healthcare professionals. This includes being thought leaders as well as being able to influence other key medical thought leaders in the organization and the community.

In today’s environment of efficiency and clinical- and cost-effectiveness of care, medical leaders must be able to direct people and programs to provide value through appropriate use of limited but necessary resources. This means being involved in managerial decision making, daily operations design and efficiency, and institutional planning; promoting a supportive work environment; being fiscally responsible; and

As the Medical Director of the Core Clinical Laboratory at Emory University Hospital Midtown, Ross Molinaro, PhD, MT(ASCP), DABCC, FACB, constantly views new laboratory tests and explores laboratory results that ultimately improve patient outcomes. Dr. Molinaro collaborates with clinicians to evaluate and implement new markers or tests for disease risk and screenings.
ensuring communication with all relevant constituencies and organizational stakeholders. And since health care is tightly regulated, medical leaders must ensure that their organizations meet or exceed all regulatory requirements and quality standards for safety and efficacy. This means a patient-centric approach to care delivery that emphasizes safety, optimum clinical outcomes, and professionalism.

**Renaissance Pathologist**

The medical director of the laboratory is ideally a pathologist with training in pathology and laboratory medicine capable of carrying out a variety of duties and responsibilities (listed below) and who complies with all regulatory requirements for this role.

- Ensures accurate test results.
- Interacts with the medical staff (consultation).
- Establishes clinical test performance parameters.
- Advises laboratory staff on patient care issues.
- Selects, evaluates, and validates new tests.
- Directs quality control and quality assurance programs.
- Evaluates clinical data and reviews abnormal results.
- Ensures compliance with accreditation.
- Plans effectively.
- Educates others.

In addition to these, essential elements include skills in leadership and team building, communication, risk management and compliance, medical services operations management, and quality management.

The duties and responsibilities of the laboratory medical director are spelled out in both the Clinical Laboratory Improvement Amendments of 1988 (CLIA) and the College of American Pathologists (CAP) Laboratory Director Standard. Under CLIA, the laboratory director is responsible for the overall operation administration of the laboratory. While laboratory directors are allowed to delegate many responsibilities, they are ultimately responsible for ensuring that all duties are properly performed and all regulatory requirements are met. This means that laboratory directors cannot delegate responsibility for the overall quality of services, the adequacy and safety of the physical facility, the presence of general supervision of the lab, a sufficient number of competent staff, an annual review of all new lab procedures, and written staff duties and responsibilities.

The CAP Standard specifies a board-certified pathologist or similarly qualified physician or doctoral scientist for this role. Importantly, the CAP Standard specifies that laboratory medical directors should have sufficient authority to carry out these duties and responsibilities. With these duties and responsibilities come significant liabilities. Laboratory medical directors are not only responsible for their own acts of commission and omission, but they can be held responsible for the acts of others whom they work with and whom they lead. This includes their fellow pathologists and laboratory scientists, as well the technical staff of the pathology practice and clinical laboratory. This “vicarious liability” extends to anything these individuals do as a part of their specified scope of duties. Additionally, laboratory directors can be held liable for failure to correct persistent quality failures. They can lose their CLIA license and be subject to civil, criminal, and monetary penalties for such failures.

**Plentiful Resources**

If individuals want to follow this path and need help to do so, there is an increasing array of resources to tap for information and for training. ASCP, together with the American Pathology Foundation (APF) and the Program Directors (PRODS) group of the Association of Pathology Chairs, has developed a consensus curriculum for laboratory management training for pathology residents.\(^1\)

Using this curriculum as a resource, residency program directors can help to build a foundation of leadership for the future. ASCP, APF, and CAP all provide programming aimed at the management of pathology practices and laboratories. CAP has also developed a certificate training program for laboratory medical directors. There are also contemporary textbooks and publications on pathology and laboratory management.\(^2-4\)

The bottom line is to be aware of the requirements of this role and understand them. Make a personal commitment to continually demonstrate the laboratory director’s vital role in patient care and define the “value proposition” as a pathologist.

Laboratory directors should endeavor to work closely with all their constituencies, both inside and outside of their institutions. They need to continually focus on effectively managing limited healthcare resources without sacrificing clinical effectiveness and patient safety. They lead efforts to create new knowledge and new innovations, as well as to become an integral part of the evolution of healthcare delivery.

Developing their skills as effective communicators, laboratory directors commit to continually improving themselves and their organizations. Educate and guide others, particularly in the effective use of the laboratory’s diagnostic tools. Never lose their focus on excellence. Embrace change, be flexible, and help others under their purview to effectively change. Be the leader who others need and will follow. Help them to want what laboratory directors want.

**References**


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Dr. Weiss is Professor of Pathology and Staff Hematopathologist, Department of Pathology/ARUP Laboratories, and Director of Faculty Outreach, Technology Ventures Development, University of Utah, Salt Lake City.
Case Studies in Hematology and Coagulation

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Naming It,

Editor’s note:
This is a summary of Dr. Tomaszewski’s presentation at the ASCP 2011 Annual Meeting/World Association of Societies of Pathology and Laboratory Medicine XXVI World Congress, Oct. 20, Las Vegas. For the full story, go to www.ascp.org/eNews.
Societal organizations such as ASCP go through a naming process. This naming of who we are is not a static, once-and-done event. Rather, naming ourselves is a constantly evolving and reaffirming feature of a healthy Society. Over the past years, ASCP has taken a long and careful look at itself, and through its good work, it has named who it is once again.

Today ASCP has named itself “the Lab Team.” No other society represents all aspects of the science and practice of pathology and laboratory medicine as well as and to the depth and breadth that the Society does.

Over the past 10 years, ASCP has evolved in its identity to become an organization that truly and uniquely represents the entire laboratory. We have designated becoming the Lab Team as our goal, and by repetitively naming who we are, we are truly becoming a living, breathing, and working “Lab Team.” Our activities as the Lab Team encompass global outreach, leadership in laboratory management, and the future of 21st-century diagnostics among many others.

Global Outreach: In 2005, ASCP committed to serving laboratories in resource-limited countries. Six years later, ASCP has worked in 17 countries in Africa, South America, Eastern Europe, and the Caribbean in cooperation with the U.S. Centers for Disease Control and Prevention through the President’s Emergency Plan for AIDS Relief. You have helped thousands of laboratory professionals improve their skills. You have helped establish stepwise laboratory accreditation standards and university curriculum. And ASCP facilitated the creation of the African Society for Laboratory Medicine.

Laboratory Management: Industry surveys have shown that laboratory education programs are not providing enough training in laboratory management. ASCP and the American Pathology Foundation have collaborated to fill this gap, partnering to deliver programming in laboratory management for pathologists and laboratory professionals. Such programs were presented at the 2011 ASCP Annual Meeting/World Association of Societies of Pathology and Laboratory Medicine (WASPaLM) XXVI World Congress. In the meantime, some laboratory professionals have gained laboratory management skills by studying for and passing the ASCP Board of Certification’s (BOC) Diplomate in Laboratory Management (DLM).

Scientific Knowledge: Staying informed about scientific advances remains a priority for ASCP members. These ASCP publications uniquely target the needs of their audiences: the American Journal of Clinical Pathology for pathologists and LabMedicine for laboratory professionals. ASCP also reports on trends and breaking news of interest to all members through the quarterly publication Critical Values and the electronic newsletters ePolicyNews, Daily Diagnosis, and eNews Briefs.

Embodiment of the Lab Team: The 2011 Annual Meeting manifested ASCP’s service to all its members. For the first time, a broad swath of programming was offered to laboratory professionals, as well as to pathologists and residents. We doubled the number of poster presentations and included not only scientific abstracts but also abstracts on laboratory practices. Attendance was more than double that of last year, with more than 2,300 attendees. Nearly half were first-time attendees. More than 600 were laboratory professionals.

Future of 21st-Century Diagnostics: ASCP has identified the 21st century as the age of molecular pathology, quantitative imaging, and computational diagnostics. You along with your colleagues in other areas of medicine are naming “big data” as a core of the New Diagnostics. You, the members of ASCP, are making the case that pathology and laboratory medicine must be at the center of a new paradigm to deliver better and more cost-effective health care.

ASCP has named the goal of “the right test, for the right patient, at the right time, for the best cost, yielding the best outcome” as the challenge of 21st-century diagnostics. You have named it, and ASCP will lead advocacy initiatives to ensure a viable system of laboratory care delivery, appropriate test utilization, and appropriate reimbursement for services rendered. We will demonstrate, with data, the value of our services and the quality that comes from certification.

ASCP, you are a much different Society than you were 10 years ago. You have looked at yourself, you have named yourself as the Lab Team, and by that naming process you are becoming an invaluable tool for the care of our patients. I congratulate each and every one of you for the courage of this journey. I look forward to the good work of this great Society.

Dr. Tomaszewski is ASCP Immediate Past President and Professor and Chair of the Department of Pathology and Anatomical Science at the State University of New York at the University of Buffalo, Buffalo, N.Y.
Andrea Bennett, ASCP Senior Program Manager of Membership and Policy Development, presented an analysis of the latest ASCP wage and vacancy surveys at the Laboratory Professional Hub.

President Bill Clinton, ASCP Keynote Speaker, (left) received the 2011 ASCP Humanitarian Award for Global Health from John E. Tomaszewski, MD, FASCP, 2010-2011 ASCP President.

Dr. Tomaszewski (left) interviewed Paul Farmer, MD, PhD, after Dr. Farmer’s Scientific Address.

A distinguished panel of clinicians and patient advocates provided their perspectives on the challenges and successes involved in establishing equal access to quality health care—with a focus on cervical cancer screening and treatment—during the general session “Global Access to Health Care: Taking a Closer Look at Cervical Cancer” held on Oct. 21. Here are the presenters, left to right: Philip Castle, PhD, MPH (moderator); Doreen Ramogola-Masire, MD, BMed Sci, BMBS, FCOG; Debra Graves, MD, MBBS, MHA, FRACMA; Tamika Felder; and Dr. Tomaszewski.

Left to right: Dr. Holladay and ASCP Past President Mark H. Stoler, MD, FASCP

Andrea Bennett, ASCP Senior Program Manager of Membership and Policy Development, presented an analysis of the latest ASCP wage and vacancy surveys at the Laboratory Professional Hub.
A crowd of ASCP attendees waited to enter the Exhibit Hall before the ribbon was cut.

ASCP President Dr. Alexander presented the Best Poster Submitted by a Resident Award to Stephen Hammond, MD.

Kojo S. Elenitoba-Johnson, MD, presented the Arthur Purdy Stout Society Lecture on personalized medicine.

ASCP Residents, including Jessica Kozel, MD, 2010–2011 Resident Council Chair (left), participated in social events such as the ASCP/WASPaLM Opening Reception.

Professor Dr. med Dr. h.c. Michael Oellerich (right) turns over the WASPaLM Presidency to Professor Dr. Gamze Mocan Kuzey (left).

ASCP President’s Award recipient Barbara McKenna, MD, FASCP, introduced the speaker, Rebecca L. Johnson, MD, FASCP, for first-ever Michele D. Raible Lecture for Residents.

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