Special Report

The American Society for Clinical Pathology’s 2013 Wage Survey of Clinical Laboratories in the United States

Edna Garcia, MPH,*  Patrick B. Fisher, MA

Since 1988, the American Society for Clinical Pathology (ASCP) has conducted its surveys to determine the extent and distribution of workforce shortages within the nation’s clinical laboratories. This confidential survey has been administered every 2 years and has served as the primary source of information for academic, government, and industry labor analysts. Results from past surveys show that laboratory medicine is a rapidly evolving field. Although ASCP recognizes the importance of continuity, each time the Wage and Vacancy Survey is administered represents an opportunity to improve its methodology to collect the most current relevant data while maximizing survey participation. The survey has evolved in response to changes within the field of laboratory medicine. New questions were added to the 2013 survey to examine some of the factors that affect wage and vacancy rates. ASCP continues to gather questions, comments, and suggestions from our members regarding laboratory medicine with the goal of addressing them through this important survey. The results of this survey will also serve as a starting point for further studies of the laboratory workforce by using the current data collected to conduct in-depth surveys for the purpose of recruitment, retention, education, marketing, certification, and advocacy.

Methodology

The 2013 Wage Survey was conducted through collaboration between ASCP’s Institute of Science, Technology, and Policy in Washington, DC and its Board of Certification (ASCP BOC) in Chicago, IL. Select ASCP members who work in the field of laboratory medicine were recruited to review the survey questions and initial findings. Partner organizations were also invited to participate in completing the survey to identify a broader range of current issues facing the laboratory workforce. Electronic survey invitations were sent on March 11, 2013 via Key Survey (an online survey vendor). The survey was closed on April 1, 2013. To maximize survey response, this survey used snowball sampling, in which respondents were asked to forward the invitation e-mail to other individuals who are currently practicing in the field. ASCP also collected information on those who were disqualified from this year’s wage survey for future research studies.

DOI: 10.1309/LLMWO4E34BQGHZXGM

Keywords

Wage survey, CME, laboratory workforce, certification, technologists, taskforce on workforce

Abbreviations

ASCP, American Society for Clinical Pathology; ASCP BOC, American Society for Clinical Pathology Board of Certification; US, United States; AABB, American Association of Blood Banks; AACC, American Association for Clinical Chemistry; AAPA, American Association of Pathologists’ Assistants; AMT, American Medical Technologists; ASCLS, American Society for Clinical Laboratory Science; ASC, American Society of Cytopathology; ASCT, American Society for Cytotechnology; ASM, American Society for Microbiology; CLMA, Clinical Laboratory Management Association; CCCLW, Coordinating Council on the Clinical Laboratory Workforce; NSH, National Society for Histotechnology; ARUP, Associated Regional and University Pathologists; LabCorp, Laboratory Corporation of America; NAACLS, National Accrediting Agency for Clinical Laboratory Sciences; CAAHEP, Commission on Accreditation of Allied Health Education Programs; VA, Veterans Administration; VHA, Veterans Health Administration; CTs, cytotechnologists; HTs, histotechnicians; HTLs, histotechnologists; MTs/MLSs/CLSs, medical technologists/medical laboratory scientists/clinical laboratory scientists; PAs, pathologists’ assistants; LAS, laboratory assistants; MLT/CLTs, medical laboratory technicians/clinical laboratory technicians; PBTs, phlebotomists; SBBs, specialists in blood banking; STEM, science, technology, engineering, and mathematics; CGs, cytogenetic technologists; NS, not significant; NA, not applicable; MBs, molecular biologists.

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The majority of the initial e-mail recipient list, derived from ASCP database, included:

- Individuals within the United States (US) and/or US Territories who currently have a certification through ASCP BOC
- Individuals within the US and/or US Territories who currently do not hold certification through ASCP BOC
- Individuals who have taken relevant continuing medical education (CME) coursework through ASCP
- Individuals who have participated in relevant CME coursework but are not ASCP BOC certified

ASCP also requested participation from the following entities by allowing the wage survey link to be posted on their web sites and distributed to their members:

- AABB (formerly the American Association of Blood Banks)
- American Association for Clinical Chemistry (AACC)
- American Association of Pathologists' Assistants (AAPA)
- American Medical Technologists (AMT)
- American Society for Clinical Laboratory Science (ASCLS)
- American Society of Cytopathology (ASC)
- American Society for Cytotechnology (ASCT)
- American Society for Microbiology (ASM)
- Clinical Laboratory Management Association (CLMA)
- Coordinating Council on the Clinical Laboratory Workforce (CCCLW)
- National Society for Histotechnology (NSH)
- Associated Regional and University Pathologists (ARUP) Laboratories
- Laboratory Corporation of America (LabCorp)
- Quest Diagnostics

Organizations in bold did not participate in the 2013 Wage survey.

The majority of the initial e-mail recipient list, derived from ASCP database, included:

- Medical technologist/medical laboratory scientist/clinical laboratory scientist (MT/MLS/CLS)
- Molecular biologist (MB)
- Pathologists’ assistant (PA)
- Phlebotomist (PBT)
- Specialist in blood banking (SBB)

Clinical laboratory occupations that were newly surveyed this year are shown in bold.

This year’s wage survey collected data on wages per clinical laboratory occupation included in the survey, wages by facility and institution, and certification. New questions added involved licensure, training sites, wages by state, union representation, and age of respondents. To further the scope of this survey, ASCP will use its newly acquired geographic information systems (GIS) software along with the wage survey dataset to examine the laboratory workforce not only by state but by regions within states. Doing so will provide a more thorough view of the workforce climate.

Findings

A total of 13,108 responses were received to this year’s wage survey. Table 1 details the total number of respondents by occupational title and level. Figure 1 shows the percentage distribution of all survey respondents. The following top 10 states provided most of the survey responses: Texas (7.9%), California (5.7%), Ohio (4.7%), Minnesota (4.5%), Illinois (4.0%), New York (4.0%), Florida (4.0%), Pennsylvania (3.8%), Wisconsin (3.6%), and North Carolina (3.4%). Results indicated that most laboratory personnel held more than one clinical laboratory position; some MT/MLS/CLS staff work as many as 3 jobs within the clinical laboratory field.

Most laboratory professionals who responded to the survey have full-time permanent positions (87.3%), followed by part-time (8.8%); PRN (pro re nata, which is Latin for “when necessary”); on call, as needed (1.7%); per diem (1.2%); and full-time/temporary contract (0.9%) (Figure 2). Staff- and lead-level respondents indicated that they work, on average, 36 to 40 hours per week in the laboratory. Higher-level laboratory personnel, such as supervisors/managers and directors, work between 31 and 50 hours on average per week. The average age of laboratory personnel is 44.3 years.

Most of the participants (70.6%) indicated that they had received their clinical training from National Accrediting Agency
for Clinical Laboratory Sciences (NAACLS)/Commission on Accreditation of Allied Health Education Programs (CAAHEP)—accredited or—approved training program, whereas 23.4% selected “on-the-job training,” 4.6% selected “other,” and 1.3% selected “don’t know.” The survey sought information on the type of facility in which a participant is employed. Over half of the respondents worked in laboratories serving hospitals with >100 beds, 8.2% worked in reference laboratories, and 0.2% stated that they are employed by a retail laboratory (Figure 3). Respondents are employed at academic, community-based, government (local, state, or federal), nonprofit, military (Veterans Administration [VA] or Veterans Health Administration [VHA]), private industry, and reference institutions.

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Table 1. Total No. of Responses by Occupational Title and Level

<table>
<thead>
<tr>
<th>Occupational Title</th>
<th>Staff</th>
<th>Lead</th>
<th>Supervisor/Manager</th>
<th>Laboratory Director</th>
<th>Other</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>CG</td>
<td>263</td>
<td>103</td>
<td>72</td>
<td>0</td>
<td>17</td>
<td>455</td>
</tr>
<tr>
<td>CT</td>
<td>341</td>
<td>86</td>
<td>133</td>
<td>3</td>
<td>14</td>
<td>577</td>
</tr>
<tr>
<td>HT</td>
<td>354</td>
<td>85</td>
<td>149</td>
<td>3</td>
<td>26</td>
<td>617</td>
</tr>
<tr>
<td>HTL</td>
<td>164</td>
<td>71</td>
<td>121</td>
<td>5</td>
<td>15</td>
<td>376</td>
</tr>
<tr>
<td>LA</td>
<td>123</td>
<td>13</td>
<td>7</td>
<td>0</td>
<td>7</td>
<td>150</td>
</tr>
<tr>
<td>MLT/CLT</td>
<td>1459</td>
<td>181</td>
<td>124</td>
<td>5</td>
<td>31</td>
<td>1800</td>
</tr>
<tr>
<td>MT/CLS/MLS</td>
<td>4379</td>
<td>1025</td>
<td>1329</td>
<td>238</td>
<td>218</td>
<td>7189</td>
</tr>
<tr>
<td>MB</td>
<td>57</td>
<td>20</td>
<td>26</td>
<td>0</td>
<td>4</td>
<td>107</td>
</tr>
<tr>
<td>PA</td>
<td>148</td>
<td>41</td>
<td>33</td>
<td>0</td>
<td>10</td>
<td>232</td>
</tr>
<tr>
<td>PBT</td>
<td>449</td>
<td>58</td>
<td>25</td>
<td>0</td>
<td>44</td>
<td>576</td>
</tr>
<tr>
<td>SBB</td>
<td>34</td>
<td>38</td>
<td>100</td>
<td>8</td>
<td>20</td>
<td>200</td>
</tr>
<tr>
<td>Other</td>
<td>140</td>
<td>105</td>
<td>298</td>
<td>99</td>
<td>187</td>
<td>829</td>
</tr>
<tr>
<td>Total</td>
<td>7911</td>
<td>1826</td>
<td>2417</td>
<td>361</td>
<td>593</td>
<td>13,108</td>
</tr>
</tbody>
</table>

CG, cytogenetic technologist; CT, cytotechnologist; HT, histotechnician; HTL, histotechnologist; LA, laboratory assistant; MLT/CLT, medical laboratory technician/clinical laboratory technician; MT/CLS/MLS, medical technologist/clinical laboratory scientist/medical laboratory scientist; MB, molecular biologist; PA, pathologists’ assistant; PBT, phlebotomist; SBB, specialist in blood banking.

Figure 1

Percentage distribution of all survey respondents. MT/CLS/MLS indicates medical technologist/clinical laboratory scientist/medical laboratory scientist; MLT/CLT, medical laboratory technician/clinical laboratory technician; HT, histotechnician; CT, cytotechnologist; PBT, phlebotomist; CG, cytogenetic technologist; HTL, histotechnologist; PA, pathologists’ assistant; SBB, specialist in blood banking; LA, laboratory assistant; MB, molecular biologist.
Those whose occupation did not fall into any given categories were asked to choose the “Other” option.

Differential pay for evening, nights, or weekend shifts is most common in hospitals with 100 to 299 beds and in nonprofit institutions; it is least common in public health laboratories and military organization (such as the VA and VHA) (Figures 4 & 5). Special rates for employees with on-call or PRN status are found mostly in reference and independent laboratories and nonprofit institutions and found least in private laboratories and private industry (Figures 6 & 7). Data show that more than 55% of each institution in the survey (academic, community-based, government [local, state, or federal], nonprofit, military [VA or VHA], private industry, and reference) offers premium pay for overtime, holiday, and weekend work; pension and
Figure 4
Percentage of facilities offering differential pay for evening, nights, or weekend shifts, by facility type/characteristics.

Figure 5
Percentage of facilities offering differential pay for evening, nights, and weekend shifts, by institution type. VA indicates Veterans Administration; VHA, Veterans Health Administration.

Figure 6
Percentage of facilities offering special rate for employees with “on-call” or PRN status, by facility type/characteristic.
retirement benefits; and medical and dental benefits. Academic institutions commonly offer tuition assistance and continuing education. Nonprofits often pay for continuing education as a benefit.

Twenty-five percent of all respondents are licensed by the state in which they currently work as a laboratory professional. Those licensed came mostly from California and least from Hawaii (Figure 8). The survey gathered data on laboratory professionals in states and territories that require licensure: California, Florida, Georgia, Hawaii, Louisiana, Montana, Nevada, New York, North Dakota, Rhode Island, Tennessee, West Virginia, and Puerto Rico.

Union representation of laboratory professionals is most common in New York (26.8%), Washington (24.9%), California (22.7%), Oregon (19.1%), Wisconsin (10.1%), Minnesota (9.5%), Michigan (9.9%), Massachusetts (8.8%), and Texas.
Overall, 7.5% of respondents reported being represented by a union at their place of employment.

Although this survey excluded clinical educators and those not actively working in a clinical laboratory, consideration was given to whether a separate survey would be needed for that group. Of the respondents not currently working in a clinical laboratory, 8.9% are clinical laboratory educators, 9.2% are retired, 19.1% are unemployed, and 22.1% work in a laboratory related industry; 40.7% chose the “other” option.

Cytogenetic Technologists

The national average hourly wage for staff-level cytogenetic technologists (CGs) is $28.63 (SD, $6.85; Figure 9). Reference and independent laboratories pay a higher hourly wage of $28.45, compared with hospitals with more than 500 beds, at $27.33. (The overall sample size \[n <30\] for this occupational level was too small for meaningful statistical analysis of pay rates by all facilities surveyed. Therefore, only reference laboratories, independent laboratories, and hospitals with > 500 beds are reported.) Private industry appears to pay an average hourly wage of $29.83, which is higher than the national rate. The hourly compensation offered by nonprofit institutions is $28.23; academic institutions pay $26.93 hourly. The sample size of less than 30 for CGs who are not certified did not allow for statistically significant comparisons (Tables 2 & 3). The average annual
wages of CGs by job level are listed in Table 4. All (100%) of the CG respondents who are certified had received their certification from ASCP Board of Certification (ASCP BOC).

Lead CGs earn an average hourly wage of $33.22 (SD, $7.53; Figure 9); all our lead-CG respondents report that they are certified and that they make this hourly wage. Supervisor/manager-level CGs are paid an average hourly rate of $39.35 (SD, $8.78; Figure 9).

On average, staff-level CGs are aged 39.2 years compared with aged 43.2 years and 46.3 years for leads and supervisors, respectively (Figures 10–12). Further analysis of wage data by facilities and institution could not be performed for lead CGs and supervisors/managers because the results would be rendered statistically insignificant (n <30). Certification data for supervisors/managers were also too small for statistically significant analysis.

Cytotechnologists

Staff-level cytotechnologists (CT) are paid an average hourly wage of $31.45 (SD, $6.18; Figure 9). Pay rates per hour are highest in reference and independent laboratories and hospitals with more than 500 beds, at $32.82 and $31.04, respectively. The facilities providing lowest hourly pay for staff-level CTs are hospitals with 300 to 499 beds ($30.80) and hospital with 100 to 299 beds ($29.47). The overall sample size (n <30) for this occupational level was too small for meaningful statistical analysis of pay rates by all facilities surveyed. Therefore, we report data from only certain facilities. Academic institutions show a higher hourly pay rate compared to the national average, at $32.74. Staff-level CTs earn an average hourly rate of $32.23 at private industries, $31.12 at nonprofit institutions, and $29.56 at community-based institutions. The sample size constraints also prevented further analysis of wage rate differences in certification of CTs (Tables 2 & 3). All (100%) of the CT respondents who are certified had earned their certifications from ASCP BOC.

Lead CTs earn an average hourly wage of $35.20 (SD, $6.12; Figure 9). The average annual wages of CT by job level is shown in Table 5.

According to survey results, staff-level CTs have an average age of 43.2 years. Lead CTs appear to be the oldest group among all of the occupational titles, at an average age of 50.3 years. Supervisors, on average, are aged 49.6 years (Figures 10–12). The overall sample sizes (n <30) of CT leads and supervisors were too small for meaningful statistical analysis of pay rates by facility and institution.

Table 3. Average Annual Wages of CGsa

<table>
<thead>
<tr>
<th>CG Job-Level Designation</th>
<th>Average Annual Wage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Staff</td>
<td>$59,530</td>
</tr>
<tr>
<td>Lead</td>
<td>$69,098</td>
</tr>
<tr>
<td>Supervisor/Manager</td>
<td>$81,847</td>
</tr>
</tbody>
</table>

CG, cytogenetic technologist.

aSome annual wages listed were made equivalent to a full-time salary.

Table 4. Average Hourly Wage for Laboratory Staff by Certification Designation

<table>
<thead>
<tr>
<th>Occupational Title</th>
<th>Certified</th>
<th>Noncertified</th>
</tr>
</thead>
<tbody>
<tr>
<td>CG</td>
<td>$28.93</td>
<td>NS</td>
</tr>
<tr>
<td>CT</td>
<td>$31.40</td>
<td>NS</td>
</tr>
<tr>
<td>HT</td>
<td>$23.94</td>
<td>$24.13</td>
</tr>
<tr>
<td>HTL</td>
<td>$26.86</td>
<td>NS</td>
</tr>
<tr>
<td>LA</td>
<td>$16.09</td>
<td>$15.88</td>
</tr>
<tr>
<td>MLT/CLT</td>
<td>$20.55</td>
<td>$19.44</td>
</tr>
<tr>
<td>MT/MLS/CLS</td>
<td>$27.13</td>
<td>$27.00</td>
</tr>
<tr>
<td>PBT</td>
<td>$15.93</td>
<td>$13.67</td>
</tr>
<tr>
<td>SBB</td>
<td>$28.07</td>
<td>NA</td>
</tr>
</tbody>
</table>

CG, cytogenetic technologist; HT, histotechnician; HTL, histotechnologist; LA, laboratory assistant; MLT/CLT, medical laboratory technician/clinical laboratory technician; MT/MLS/CLS, medical technologist/medical laboratory scientist/clinical laboratory scientist; PBT, phlebotomist; SBB, specialist in blood banking; NA, not applicable.

aSample size was less than 30 (n <30) and did not allow for statistically significant comparisons.

bAll SBB respondents are certified.

Table 5. Average Annual Wages of CTsa

<table>
<thead>
<tr>
<th>CT Job-Level Designation</th>
<th>Average Annual Wage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Staff</td>
<td>$64,416</td>
</tr>
<tr>
<td>Lead</td>
<td>$73,216</td>
</tr>
<tr>
<td>Supervisor/Manager</td>
<td>$82,556</td>
</tr>
</tbody>
</table>

CT, cytotechnologist.

aSome annual wages listed were made equivalent to a full-time salary.
The national average hourly wage for staff-level histotechnicians (HTs) is $23.96 (SD, $5.09; Figure 9). Pay rates among the laboratory facilities surveyed are comparable except for reference and independent laboratories, which provide HTs with the highest hourly wage of $24.38. The overall sample size (n <30) for this occupational level was too small for meaningful statistical analysis of pay rates by all facilities surveyed. Facilities with significant data but comparable wages include hospitals with 100 to more than 500 beds (at between $23.50 and $24.00/hr).

Community-based institutions and private industries pay staff-level HTs higher than the national hourly wage, at $24.69 and $24.26, respectively. Nonprofit institutions, however, pay below the national average, at $22.74 per
hour. The overall sample size (n < 30) for this occupational level was too small for meaningful statistical analysis of pay rates by all institutions surveyed.

Overall, certified HTs are paid an average hourly wage of $26.09, whereas noncertified HTs are paid $24.48 hourly (Table 2). Certified staff-level HTs earn $23.94 per hour, whereas noncertified staff-level HTs earn an hourly wage of $24.13 (Table 3). Although it appears that average hourly wages for noncertified HTs are higher compared with those of certified HTs, the low sample size of noncertified compared with certified individuals may have provided an inaccurate comparison. Of the HTs who reported that they are certified, 99.9% had received their certification ASCP BOC and 0.1% from American Medical Technologists (AMT).

Lead-level HTs are paid an average hourly rate of $26.81 (SD, $4.96). HT supervisors earn an average hourly rate of $31.29 (SD, $7.94; Figure 9). The average annual wages of HTs by job level are shown in Table 6.

The average age of staff HTs is 42.7 years. The average age of lead HTs is 45.4 years and that of supervisors/managers is 48.0 years (Figures 10-12). Analysis of wage data by facilities, institutions, and certification for lead and supervisors/managers was not performed because the results would provide statistically insignificant values.

Histotechnologists
The average hourly wage for staff histotechnologists (HTL) is $26.63 (SD, $5.98). HTL leads earn an average hourly rate of $28.76 (SD, $6.11). Supervisor/manager HTLs are paid an average hourly wage of $32.41 (SD, $6.60; Figure 9). The average annual wages of HTL, by job level, are listed in Table 7.

Staff HTLs have an average age of 41.9 years. The average ages of leads and supervisors are 44.5 and 48.8 years, respectively (Figures 10-12). All of the HTLs in this survey are certified by ASCP BOC.
Results of the wage difference among laboratory facilities, institutions, and individuals with different certification grades for HTLs (Tables 2 & 3) does not allow for statistically significant comparisons because the respondent group for most of the facilities included in the survey had a sample size of less than 30.

Laboratory Assistants
On average, laboratory assistant (LA) staff members make $16.03 per hour (SD, $3.52; Figure 9). Certified LAs are paid an average hourly wage of $16.52 and noncertified LAs are paid $16.00 hourly on average (Table 2). Certified staff-level LAs earn an hourly average of $16.09, compared with noncertified LAs, who make an average of $15.88 hourly (Table 3). The average annual wage for staff-level LAs is listed in Table 8.

According to survey results, 96.3% of certified LAs earned their certification from ASCP BOC. Staff LAs have an average age of 43.0 years (Figures 10-12).

Results of the wage difference between laboratory facilities and institutions for LAs do not allow for statistically significant comparisons. For the same reasons, we could not perform analysis of the national average wage and average age for LA leads and supervisors.

Medical Laboratory Technicians (MLTs)/Clinical Laboratory Technicians (CLTs)
The national average hourly wage for staff-level medical laboratory technicians (MLTs)/clinical laboratory technicians (CLTs) is $20.49 (SD, $4.39; Figure 9). Pay rates are highest at hospitals with 300 to 499 beds, at $20.85 per hour, and lowest at physician’s office laboratories, at $19.79 per hour (Figure 13). The overall sample size (n <30) for this occupational level was too small for meaningful statistical analysis of pay rates by all facilities surveyed. Another facility with significant wage data was hospitals with less than 100 beds: the average hourly wage was $22.79. Staff MLTs/CLTs earn higher than the national hourly average wage in academic institutions, at $21.66. Based on the data we collected, hourly wages by institution type are as follows: nonprofit institutions, $20.57; community-based, $20.53; government (local, state, or federal), $20.00; and private industry, $19.99. The overall sample size (n <30) for certain occupational levels was too small for meaningful statistical analysis of pay rates by all institutions surveyed. Overall, certified MLTs/CLTs earn an average hourly wage of $20.88 and noncertified MLTs/CLTs make an average hourly wage of $19.89 (Table 2).

Staff-level MLTs/CLTs who are certified earn 5% more than those who are not certified (Table 3). Of the MLTs/CLTs
who reported that they are certified, 97.8% earned their certification from ASCP BOC, 2.0% from the American Medical Technologists (AMT), and 0.1% from the American Association of Bioanalysts (AAB).

Lead MLTs/CLTs are paid an average hourly wage of $22.38 (SD, $4.45; Figure 9). Hospitals with 100 to 299 beds have higher hourly rates, at $24.21, compared with physician’s office laboratories, at $19.79 per hour. The overall sample size \(n < 30\) for this occupational level was too small for meaningful statistical analysis of pay rates by all facilities surveyed. MLTs/CLTs supervisors/managers earn an average rate of $22.60 (SD, $5.58; Figure 9).

Average annual rates for MLTs/CLTs by job level can be found in Table 9.

Geographically, MLTs/CLTs, regardless of position level, are paid significantly higher wages in Massachusetts, New Jersey, Washington, Pennsylvania, Illinois, Minnesota, Indiana, Michigan, Virginia, and Wisconsin (Figure 14). The average age of staff MLTs/CLTs is 40.7 years. The age of leads averages 43.3 years, and that of supervisors/managers averages 47.1 years (Figures 10-12). Georgia has the youngest staff MLTs/CLTs, at an average of 37.9 years, and the state of Washington has the oldest staff, at an average of 45.3 years (Table 16).

Due to sample-size restrictions \(n < 30\), we could not perform statistical analysis of wage differences between certification of leads, supervisors/managers, and directors. We also could not perform further analysis of wage data by facility and institution for supervisors/managers because the results would be rendered statistically insignificant \(n < 30\).
Staff-level medical technologists (MTs)/medical laboratory scientists (MLSs)/clinical laboratory scientists (CLSs) are paid an average hourly rate of $27.13 (SD, $10.74; Figure 9).

Based on the statistically significant data collected, academic institutions provide the highest hourly pay, at $28.18, for staff MTs/MLSs/CLSs; physician’s office laboratories offer the lowest average hourly rate, at $24.20 (Figure 15). The overall sample size ($n<30$) for this occupational level was too small for meaningful statistical analysis of pay rates by all facilities surveyed. Therefore, only some of the facilities are reported.

One explanation why academic institutions provide high compensation could be that, mostly, they hire laboratory personnel with more-advanced degrees (for example, bachelor’s degrees). The following institutions provide an average hourly wage to staff MTs/MLSs/CLSs that surpasses the national average: military (Veterans Administration [VA] or Veterans Health Administration [VHA]), at $27.74; community-based ($27.37); reference ($27.30), and nonprofit ($27.25). Government (local, state, or federal) and private industry pay below the national hourly average, at $26.27 and $25.82, respectively. Certified MTs/MLSs/CLSs are paid an average hourly wage of $28.39. Noncertified MTs/MLSs/CLSs earn, on average, $28.23 per hour (Table 2).

Certified staff level MTs/MLSs/CLSs earn, on average, $27.13, whereas noncertified MTs/MLSs/CLSs make an average $27.00 per hour (Table 3). Our data indicate that 94.6% of certified MTs/MLSs/CLSs received their certification from ASCP BOC, 4.7% from the American Medical Technologist (AMT), and 0.7% from the American Association of Bioanalysts (AAB).

The average hourly wage for lead MTs/MLSs/CLSs is $30.81 (SD, $20.75; Figure 9). Reference and independent laboratories pay a significantly high hourly rate for lead MTs/MLSs/CLSs compared with all facilities surveyed, at $40.52. The facility providing the lowest pay is the hospital with less than 100 beds, at $28.67 per hour (Figure 16). The overall sample size ($n<30$) for this occupational level was too small for meaningful statistical analysis of pay rates by all facilities surveyed. Facilities with significant data for hourly staff wage were hospitals with 300 to 499 beds ($15.16), outpatient clinic laboratories ($14.95), hospitals with less than 100 beds ($14.30), and hospitals with more than 500 beds ($14.27). The average age of MT/MLS/CLS staff by state can be seen in Table 10.

Private industries, academic institutions, and reference institutions pay higher than the national average hourly wage, at $34.52, $31.72, and $30.88, respectively. Types of institutions that pay slightly lower than the national hourly average are nonprofits ($30.44), government (local, state, or federal; $30.02), and community-based ($29.70).
All MT/MLS/CLS leads who participated in the survey are certified and earn at least $30.81 per hour.

MT/MLS/CLS supervisors/managers earn an average hourly wage of $32.82 (SD, $8.60; Figure 9). Results indicate that hospitals with more than 500 beds pay the highest hourly wage, at $35.36, whereas physician’s-office laboratories pay $24.99 per hour (Figure 17). The overall sample size (n <30) for this occupational level was too small for meaningful statistical analysis of pay rates by all facilities surveyed. Facilities with significant data for hourly staff wage were hospitals with 300 to 499 beds ($15.16), outpatient clinic laboratories ($14.95), hospitals with fewer than 100 beds ($14.30), and hospitals with more than 500 beds ($14.27). Participant data also reveal that the following institutions provide an hourly compensation rate that is higher than the national average for this occupational level: academic ($35.86), government (local, state, or federal; $34.12), and nonprofit ($33.34). Community-based institutions pay slightly less than the hourly average, at $32.60, and private industry even lower, at $30.00. On average, MT/MLS/CLS laboratory directors make $36.18 per hour (SD, $17.95; Figure 9).

The highest-paying states for all MT/MLS/CLS levels are California, Nevada, Oregon, Connecticut, Massachusetts, Tennessee, Washington, New York, Arizona, and Maryland (Figure 18). The average annual wage for MTs/MLSSs/CLSs by job level can be seen in Table 11.

The mean age for staff MTs/MLSSs/CLSs is 42.0 years. Lead MTs/MLSSs/CLSs have an average age of 46.5 years, and supervisors/managers have an average age of 49.6
years (Figures 10-12). Utah has the youngest staff MTs/MLSs/CLSs, with an average age of 35.8 years, and California has the oldest, with an average age of 47.5 years. Lead MTs/MLSs/CLSs in Minnesota have the youngest average age, at 44.9 years, and California once again has the oldest leads, at an average of 51.3 years. Last, Minnesota again has the youngest group of supervisor/manager MTs/MLSs/CLSs, with an average age of 45.0 years, and Tennessee again has the oldest supervisors/managers, at an average of 53.0 years (Tables 16-18).

Due to sample-size restrictions (n <30), we could not perform statistical analysis of wage differences between certification of supervisor/managers and laboratory directors. We also did not perform analysis of wage data by facility and institution for laboratory directors because the results would provide statistically insignificant values.

**Molecular Biologists**

The average hourly wage for staff-level molecular biologists (MBs) is $26.96 (SD, $6.80; Figure 9). According to survey results, MB staff members are the youngest laboratory professionals, with an average age of 35.89 years.

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**Table 11. Average Annual Wage for MT/MLS/CLS**

<table>
<thead>
<tr>
<th>MT/MLS/CLS Job-Level Designation</th>
<th>Average Annual Wage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Staff</td>
<td>$56,430</td>
</tr>
<tr>
<td>Lead</td>
<td>$64,085</td>
</tr>
<tr>
<td>Supervisor/Manager</td>
<td>$77,113</td>
</tr>
<tr>
<td>Laboratory Director</td>
<td>$92,946</td>
</tr>
</tbody>
</table>

MT/MLS/CLS, medical technologist/medical laboratory technician/clinical laboratory scientist.

*Some annual wages listed were made equivalent to a full-time salary.*
The average annual wage for staff-level MBs can be seen in Table 12. Of the MBs who reported that they are certified, 99.5% earned their certification from ASCP Board of Certification (ASCP BOC) and 0.5% from the American Association of Bioanalysts (AAB).

Results regarding the wage differences between laboratory facilities, institutions, and certification attainment (Tables 2 & 3) for MBs do not allow for statistically significant comparisons because respondents in the survey had a sample size of less than 30.

Pathologists’ Assistants

The national average hourly wage for staff-level pathologists’ assistants (PAs) employees is $46.32 (SD, $33.56; Figure 9). The average hourly wage for PAs can be seen in Table 13. Supervisor/manager–level PAs are paid an average hourly wage of $48.74 (SD, $9.13; Figure 9).

Staff PAs have an average age of 37.7 years. Leads and supervisors/managers are the youngest among the laboratory professionals surveyed, at 40.4 years and 43.2 years on average, respectively (Figures 10-12).

According to survey results, 100.0% of certified PAs are certified by ASCP BOC. We did not perform analysis of wage data by facility, institution, and certification for PAs because the results would provide statistically insignificant values.

Phlebotomists

Staff phlebotomists (PBTs) are paid an average hourly wage of $15.60 (SD, $23.35; Figure 9). Our results indicate that physician’s office laboratories pay the highest hourly wage, at $24.78, and that hospitals with 100 to 299 beds pay the lowest hourly wage, at $13.41. Staff PBTs are paid higher than the average national hourly wage of $19.61 at private industries. Nonprofit and community-based institutions pay staff $14.55 and $13.81 per hour, respectively.

The overall sample size (n <30) for this occupational level was too small for meaningful statistical analysis of pay rates by all institutions surveyed.

Lead PBTs are paid an average hourly wage of $16.71 (SD, $4.13). Overall, PBTs make an average hourly wage of $16.08, whereas noncertified PBTs earn $13.91 hourly (Table 2). Certified staff-level PBTs earn 12.9% more than those who are not certified (Table 3). Average annual wages for PBT by job level can be seen in Table 14. Our data show that 99.5% of PBTs are certified by ASCP BOC and 0.5% by the American Medical Technologists (AMT).

The data indicate that the average age for staff PBTs is 41.1 years, and that leads have an average age of 43.6 years (Figures 10-12). Results of the wage differences among laboratory facilities, institutions, and certification statuses for lead and supervisor/manager PBTs do not allow for statistically significant comparisons because the respondents for most of the facilities included in the survey had a sample size of less than 30. Also, we did not perform further analysis of supervisors’/managers’ average age due to sample size restrictions.
Specialists in Blood Banking

Staff-level specialists in blood banking (SBB) are paid an average hourly wage of $28.07 (SD, $6.68). SBB leads earn an average hourly wage of $32.11 (SD, $6.17). The average hourly wage for supervisor/manager SBB employees is $34.44 (SD, $6.24; Figure 9). Average annual wages of SBBs by job level can be seen in Table 15.

All of the SBBs who responded to the survey are certified (Tables 2 & 3). The data indicate that 99.5% of certified SBBs received their certification from ASCP BOC and 0.5% from the American Medical Technologist (AMT).

Staff and supervisor/manager SBBs are the oldest group of laboratory professionals, with an average age of 47.0 years for staff and 49.7 years for supervisors/managers. Leads have an average age of 48.4 years (Figures 10-12). Analysis of wage data by facility and institution for SBBs was not performed because the results would provide statistically insignificant values.

Summary

Wages for staff- and supervisor/manager-level cytotechnologists (CTs), histotechnicians (HTs), histotechnologists (HTLs), medical technologists/medical laboratory scientists/clinical laboratory scientists (MTs/MLs/CLSs), and pathologists’ assistants (PAs); staff laboratory assistants (LAs), medical laboratory technicians/clinical laboratory technicians (MLTs/CLTs), phlebotomists (PBTs), and supervisor/manager specialists in blood banking (SBBs) are up this year compared with the wages reported by participants in the 2010 ASCP Wage survey (http://labmed.ascpjournals.org/content/42/3/141.full). LAs and PBTs continue to have lower salaries and CTs and PAs to have higher salaries than the rest of the laboratory professions surveyed.
Special Report

Total compensation by occupational title is highest in reference and independent laboratories and hospitals, except for PBTs, who get paid the most at physician’s-office laboratories. Where data allowed for comparisons between certification status, wages tend to be higher for certified laboratory personnel (Tables 2 & 3). Overall, the salary outlook for the laboratory profession appears to be thriving.

Although salaries appear to have increased over time for the overall profession, there is not a considerable difference between the average hourly wages of laboratory professionals working in their current occupational title for 1 to 5 years compared with those working for longer than 30 years (Tables 19-21). Results from the survey also show that higher-level laboratory personnel work an average of 31 to 50 hours per week and that a typical laboratory professional holds more than one job in the clinical laboratory. Laboratory professionals working in more than one clinical laboratory may explain why vacancies remain relatively low, but is consistent with a critical shortage of qualified personnel.

In addition to analyzing wages, this survey also asked questions to gain an in-depth perspective on the laboratory workforce. According to survey results, the youngest laboratory professional group has an average age of 35.9 years and the oldest, 50.3 years, with supervisors/managers in the older group (Figures 10-12). There have been concerns that the laboratory workforce is aging and...
that the incoming increase in healthcare use will drive the need for more laboratory personnel. Strategic recruitment of the next generation of laboratory professionals must take place to fulfill future demands. The Task Force on Laboratory Professionals Workforce Report (http://www.ascp.org/PDF/Advocacy/ASCP-Task-Force-on-Lab-Pros.pdf) pointed out that one of the main recruitment challenges that could contribute to the shortage of well-trained laboratory professionals is the lack of recognition for laboratorians in the healthcare environment. As a response, the report offered suggestions such as targeting the STEM (science, technology, engineering, and mathematics) pipeline and providing support to nontraditional students and prospective students from rural areas.

ASCP seeks opportunities to explore the key issues that impact the clinical laboratory workforce. Some of the data we collected will be used for further research, with the goal of generating a separate report for each topic. We plan to explore areas such as wage differences between licensure vs nonlicensure states, wages and union representation, and salaries by regions within a state, as well as conducting a separate survey on those who were disqualified from this survey but work in a closely related field, specifically clinical laboratory educators and those who work in a laboratory related industry. LM

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