

# 2002 Wage and Vacancy Survey of Medical Laboratories

## Part II: Modest Easement of Staffing Shortage

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Part I of the 2002 Wage and Vacancy Study appeared in the September issue of *Laboratory Medicine*.<sup>1</sup> That report focused on the response rates by laboratory type and the wages associated with 12 categories of clinical laboratory staff. The detailed methodology related to the design of the questionnaire, sample size, response rate, and sampling error were previously described.

This report will cover vacancy rates for 12 categories of clinical laboratory staff—medical technologist (MT), MT supervisor, MT manager, cytotechnologist (CT), CT supervisor, histotechnician (HT), histotechnologist (HTL) and HT/HTL supervisor, medical laboratory technician (MLT), MLT supervisor, phlebotomist (PBT), and PBT supervisor, as well as recruiting and hiring practices for these positions as reported by laboratory managers.

The primary objective of this study was to determine whether or not there is a shortage of nationally certified or licensed technical personnel and to understand the distribution of the personnel shortages. This survey was also designed to determine the vacancy rates for certified or licensed staff positions compared to non-certified or non-licensed staff positions.

### Methods

**Budgeted and Vacant Positions:** Each laboratory manager surveyed was asked to respond to the *number of certified/licensed budgeted positions* and *number of non-certified/non-licensed budgeted positions* for each staff position. They were also asked to indicate the *number of certified/licensed vacant positions* and the *number of non-certified/non-licensed vacant positions*. The mean number of the budgeted positions and the mean number of the vacancies for each category were then calculated. The vacancy rate is the mean for the vacancies divided by the mean number of budgeted positions. Vacancy rates are sub-stratified by the following employer groups—laboratory type (hospital, private clinic/reference laboratory, private doctors practice group, and outpatient clinic), hospital size (less than 100 beds, 100-299 beds, 300-499 beds, and 500+ beds), practice setting (rural, suburban, small/medium sized city and large city) and region of the country (Northeast, South Central Atlantic, East North Central, West North Central, West South Central, and

the Far West). Samples with fewer than 30 for the employer types are too small for statistically significant comparisons and will not be given in this report.

### Results

**Vacancy Rates:** **T1** through **T7** show the vacancy rates for each of the 12 staff categories by employer group. **T1** reveals that the overall vacancy rate for certified/licensed MT staff is 7.0%, while the vacancy rate for non-certified/non-licensed MT staff is 4.1%. The mean number of budgeted positions (not shown) per facility was 17.5 certified MT staff positions, while the mean number of budgeted positions for non-certified/non-licensed MT staff was found to be 5.2 per facility. Certified/licensed vacancy rates exceed 10% in hospitals with less than 100 beds (11.1%), hospitals with 100-299 beds (11.7%), rural areas (10.4%), and in the West South Central region (10.2%). The lowest certified/licensed vacancy rates were found in private/clinic/reference laboratories (4.8%) and hospitals with 500+ beds (4.8%). The only employer type that shows a higher vacancy rate for non-certified/non-licensed MTs is in hospitals with 100-299 beds.

**T2** shows the vacancy rates for certified/licensed MT supervisors and managers. The vacancy rates for non-certified/non-licensed MT supervisors and managers are not presented because the sample size for these non-certified/non-licensed employees is too small for statistically significant analysis. The overall certified/licensed vacancy rate for MT supervisors is 5.9%; however, the certified/licensed vacancy rate is 11.4% in outpatient clinics and 8.2% in hospitals with 100-299 beds. The West South Central region has the highest certified/licensed vacancy rate at 7.8%. As expected, the lowest certified/licensed vacancy rate (1.7%) for MT supervisors is found in private doctors practice groups.

**T3** shows vacancy rates for certified/licensed CT staff and CT supervisors. Only certified/licensed vacancy rates were measured. Although the overall total vacancy rate for CT staff is 7.6%, certified/licensed vacancy rates exceed 10% in private clinic/reference laboratories (10.7%), and were 18.7% in the South Central Atlantic region. The lowest certified/licensed

**Vacancy Rates (%) for Certified/Licensed and Non-Certified/Non-Licensed Medical Technologist (MT) Staff (n= the Number of Laboratories Represented)**

**T1**

Employer Group	Certified/Licensed MT Staff	Non-Certified/Non-Licensed MT Staff
Total	7.0 (n=1,153)	4.1 (n=124)
<b>Lab Type</b>		
Hospital	7.2 (n=832)	4.2 (n=103)
Private clinic/reference lab	4.8 (n=129)	*
Private doctors practice group	6.1 (n=140)	*
Outpatient clinic	8.4 (n=52)	*
<b>Hospital Size</b>		
Less than 100 beds	11.1 (n=378)	0.0 (n=33)
100 – 299 beds	11.7 (n=266)	12.6 (n=31)
300 – 499 beds	7.1 (n=121)	*
500+ beds	4.8 (n=67)	*
<b>Practice Setting</b>		
Rural	10.4 (n=434)	12.4 (n=36)
Suburbs	6.3 (n=117)	*
Small/medium size city	6.8 (n=422)	1.2 (n=41)
Large city	6.1 (n=162)	*
<b>Region</b>		
Northeast	8.3 (n=128)	1.4 (n=34)
South Central Atlantic	6.6 (n=267)	*
East North Central	6.7 (n=181)	*
West North Central	6.3 (n=167)	*
West South Central	10.2 (n=168)	*
Far West	6.0 (n=242)	*

\* Sample size too small for any statistically valid comparisons

**Key for regions:**

**Northeast** - Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, and Vermont

**South Central Atlantic** – Alabama, Delaware, District of Columbia, Florida, Kentucky, Georgia, Maryland, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, and West Virginia

**East North Central** – Illinois, Indiana, Michigan, Ohio, and Wisconsin

**West North Central** – Iowa, Kansas, Minnesota, Nebraska, Missouri, North Dakota, and South Dakota

**West South Central** – Arkansas, Louisiana, Oklahoma, and Texas

**Far West** - Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming

vacancy rates are found in hospitals with 100-299 beds (4.0%), and in the East North Central region (4.1%). Although the total overall certified/licensed vacancy rate for CT supervisors is 5.8%, certified/licensed vacancy rates exceed 8% for hospitals with 100-299 beds (12.2%), are 8.8% for laboratories in the South Central Atlantic, and 8.3% in the East North Central regions of the country.

**T4** shows the vacancy rates for both certified/licensed and non-certified/non-licensed HT staff. Noteworthy is that the overall total vacancy rate for certified/licensed staff is 8.7%, while the non-certified/non-licensed vacancy rate for HT staff is 3.7%. Certified/licensed vacancy rates exceed 10% for hospitals with 500+ beds (11.2%), are 10.2% in the South Central Atlantic, 12.2% in the West North Central, and 13.5% in the Far West regions. The lowest vacancy rates are found in the East North Central (2.6%) region.

**Vacancy Rates (%) for Certified/Licensed Medical Technologist (MT) Supervisors and MT Managers (n= the Number of Laboratories Represented)**

**T2**

Employer Group	MT Supervisors	MT Managers
Total	5.9 (n=833)	3.7 (n=1,056)
<b>Lab Type</b>		
Hospital	5.8 (n=594)	3.1 (n=738)
Private clinic/reference lab	6.8 (n=96)	8.4 (n=120)
Private doctors practice group	1.7 (n=107)	2.4 (n=159)
Outpatient clinic	11.4 (n=36)	4.8 (n=39)
<b>Hospital Size</b>		
Less than 100 beds	4.8 (n=196)	5.3 (n=333)
100 – 299 beds	8.2 (n=230)	3.2 (n=238)
300 – 499 beds	4.5 (n=109)	4.0 (n=105)
500+ beds	5.0 (n=59)	1.3 (n=62)
<b>Practice Setting</b>		
Rural	6.5 (n=261)	5.1 (n=394)
Suburbs	3.6 (n=93)	2.7 (n=107)
Small/medium size city	6.3 (n=340)	3.1 (n=392)
Large city	5.8 (n=125)	4.4 (n=145)
<b>Region</b>		
Northeast	7.0 (n=102)	6.7 (n=123)
South Central Atlantic	5.2 (n=205)	2.5 (n=259)
East North Central	6.8 (n=132)	2.8 (n=167)
West North Central	5.8 (n=107)	3.2 (n=145)
West South Central	7.8 (n=119)	6.7 (n=154)
Far West	4.2 (n=168)	2.6 (n=208)

**Vacancy Rates (%) for Certified/Licensed Cyto-technologist (CT) Staff and CT Supervisors (n= the Number of Laboratories Represented)**

**T3**

Employer Group	CT Staff	CT Supervisor
Total	7.6 (n=250)	5.8 (n=161)
<b>Lab Type</b>		
Hospital	6.3 (n=205)	6.6 (n=124)
Private clinic/reference lab	10.7 (n=38)	2.8 (n=33)
Private doctors practice group	*	*
Outpatient clinic	*	*
<b>Hospital Size</b>		
Less than 100 beds	*	*
100 – 299 beds	9.6 (n=84)	12.2 (n=42)
300 – 499 beds	4.0 (n=62)	7.0 (n=42)
500+ beds	6.6 (n=46)	4.4 (n=35)
<b>Practice Setting</b>		
Rural	4.4 (n=40)	*
Suburbs	*	*
Small/medium size city	8.0 (n=125)	4.9 (n=82)
Large city	8.2 (n=52)	6.5 (n=38)
<b>Region</b>		
Northeast	2.9 (n=45)	4.0 (n=37)
South Central Atlantic	18.7 (n=60)	8.8 (n=33)
East North Central	4.1 (n=57)	8.3 (n=30)
West North Central	6.1 (n=30)	*
West South Central	*	*
Far West	9.4 (n=42)	*

\* Sample size too small for any statistically valid comparisons

**T5** shows the vacancy rates for certified/licensed HTL staff and certified/licensed HT/HTL supervisors. The overall total vacancy rate for certified/licensed HTL staff is 10.7%. Vacancy rates for non-certified/non-licensed HTL staff are too small for

**Vacancy Rates (%) for Certified/Licensed and Non-Certified/Non-Licensed Histotechnician Staff (n= the Number of Laboratories Represented)**

**T4**

Employer Group	Certified/Licensed HT Staff	Non-Certified/Non-Licensed HT Staff
Total	8.7 (n=265)	3.7 (n=119)
<b>Lab Type</b>		
Hospital	9.1 (n=228)	3.9 (n=103)
Private clinic/reference lab	*	*
Private doctors practice group	*	*
Outpatient clinic	*	*
<b>Hospital Size</b>		
Less than 100 beds	*	*
100 – 299 beds	7.0 (n=115)	0.0 (n=51)
300 – 499 beds	8.2 (n=53)	*
500+ beds	11.2 (n=34)	*
<b>Practice Setting</b>		
Rural	4.7 (n=54)	*
Suburbs	*	*
Small/medium size city	8.2 (n=141)	7.1 (n=58)
Large city	7.4 (n=42)	*
<b>Region</b>		
Northeast	*	*
South Central Atlantic	10.2 (n=83)	*
East North Central	2.6 (n=54)	*
West North Central	12.2 (n=30)	*
West South Central	6.2 (n=35)	*
Far West	13.5 (n=36)	*

\* Sample size too small for any statistically valid comparisons

**Vacancy Rates (%) for Certified/Licensed Histotechnologist (HTL) Staff and Histotechnician/Histotechnologist (HT/HTL) Supervisors (n= the Number of Laboratories Represented)**

**T5**

Employer Group	Certified/Licensed HTL Staff	Certified Licensed HT/HTL Supervisors
Total	10.0 (n=205)	5.9 (n=229)
<b>Lab Type</b>		
Hospital	10.9 (n=176)	6.5 (n=192)
Private clinic/reference lab	*	*
Private doctors practice group	*	*
Outpatient clinic	*	*
<b>Hospital Size</b>		
Less than 100 beds	*	*
100 – 299 beds	16.2 (n=63)	10.9 (n=75)
300 – 499 beds	11.7 (n=59)	3.5 (n=58)
500+ beds	9.0 (n=38)	6.7 (n=45)
<b>Practice Setting</b>		
Rural	*	0.0 (n=33)
Suburbs	9.8 (n=31)	*
Small/medium size city	14.2 (n=90)	5.0 (n=112)
Large city	8.2 (n=52)	4.2 (n=52)
<b>Region</b>		
Northeast	6.1 (n=30)	2.3 (n=30)
South Central Atlantic	11.6 (n=61)	4.6 (n=66)
East North Central	11.6 (n=35)	9.8 (n=36)
West North Central	*	*
West South Central	*	8.2 (n=32)
Far West	12.7 (n=38)	8.3 (n=39)

\* Sample size too small for any statistically valid comparisons

statistical comparisons. Certified/licensed vacancy rates exceed 10% for hospitals overall (10.9%), hospitals with 100-299 beds (16.2%), hospitals with 300-499 beds (11.7%), small/medium sized cities (14.2%), the South Central Atlantic (11.6%), East North Central (11.6%), West North Central (12.9%), and the Far West (12.7%) regions. The lowest vacancy rates are in the Northeast region (6.1%). The overall total vacancy rate for HTL supervisors is 5.9%. The sample size for non-certified/non-licensed employees in this position is too small for statistically significant vacancy rate analysis. Certified/licensed vacancy rates exceed 10% for hospitals with 100-299 beds. Vacancy rates are also higher for employees in the East North Central (9.8%), West South Central (8.2%), and the Far West (8.3%) regions of the country.

**T6** shows the vacancy rates for both certified/licensed and non-certified/non-licensed MLT staff, as well as certified/licensed MLT supervisors. The overall total certified/licensed vacancy rates for staff MLT is 8.6%, while the vacancy rate for non-certified/non-licensed MLT staff is 11.9%. However, the mean number of budgeted positions per facility (not shown) for the certified/licensed MLT staff is 5.1 versus 2.8 budgeted positions for non-certified/non-licensed MLT staff. Certified/licensed vacancy rates equal or exceed 10.0% in private doctors groups (10.0%), outpatient clinics (13.8%), hospitals with less than 100 beds (11.7%), hospitals with 100-299 beds (11.0%), large cities (10.7%), and the West South Central region (12.6%). Hospitals with 500+ beds (3.7%) and the Northeast region (3.5%) report the lowest vacancy rates for certified/licensed MLT staff. Noteworthy is the fact that hospitals overall, hospitals with 299 beds or less, small/medium cities, and laboratories in the East North Central region report non-certified/non-licensed vacancy rates that are similar to or greater than the certified/licensed vacancy rates. The overall vacancy rate for the certified/licensed MLT supervisors is 7.1%. The sample size for the non-certified/non-licensed employees in these positions is too small for statistically significant comparisons. Vacancy rates for certified/licensed MLT supervisors exceed 10% in the South Central Atlantic region (12.8%).

**T7** shows the vacancy rates for certified/licensed PBT staff and the non-certified/non-licensed PBT staff. For this position, the vacancy rate for the certified/licensed PBT staff (9.1%) is higher than the vacancy rate for the non-certified/non-licensed PBT staff (5.4%). Certified/licensed vacancy rates for PBT staff exceed 10% for private clinic/reference laboratories (10.6%), hospitals with 100-299 beds (14.7%), the West North Central region (11.8%), and the Far West region (10.3%). Private doctors practice groups (4.9%) report the lowest certified/licensed vacancy rates for this position. The vacancy rate for certified/licensed PBT supervisors is 7.5%. The sample size for the non-certified/non-licensed employees in this position is too small for statistically significant comparisons. Certified/licensed PBT supervisor vacancy rates exceed 10% for hospitals with 100-299 beds (13.8%), in large cities (10.9%), and the East North Central region (12.3%). The lowest vacancy rate for certified/licensed PBT supervisors is in the Northeast region (3.1%).

**Vacancy Rates (%) for Certified/Licensed Medical Laboratory Technician (MLT) Staff, Non-Certified MTL Staff, and Certified/Licensed MLT Supervisors (n= the Number of Laboratories Represented)**

**T6**

Employer Group	Certified/Licensed MLT Staff	Non-Certified/Non-Licensed MLT Staff	Certified/Licensed MLT Supervisor
Total	8.6 (n=892)	11.9 (n=11.9%)	7.1 (n=174)
<b>Lab Type</b>			
Hospital	8.3 (n=614)	12.2 (n=109)	7.2 (n=85)
Private clinic/reference lab	8.3 (n=101)	*	*
Private doctors practice group	10.0 (n=144)	4.6 (n=41)	5.3 (n=50)
Outpatient clinic	13.8 (n=33)	*	*
<b>Hospital Size</b>			
Less than 100 beds	11.7 (n=289)	11.4 (n=43)	6.4 (n=31)
100 – 299 beds	11.0 (n=196)	23.5 (n=35)	6.6 (n=37)
300 – 499 beds	7.8 (n=79)	*	*
500+ beds	3.7 (n=50)	*	*
<b>Practice Setting</b>			
Rural	7.9 (n=378)	6.3 (n=67)	5.0 (n=61)
Suburbs	7.6 (n=77)	*	*
Small/medium size city	6.8 (n=339)	14.6 (n=65)	2.1 (n=69)
Large city	10.7 (n=86)	*	*
<b>Region</b>			
Northeast	3.5 (n=92)	*	*
South Central Atlantic	8.9 (n=286)	7.3 (n=40)	12.8 (n=51)
East North Central	7.9 (n=162)	20.1 (n=37)	0.4 (n=36)
West North Central	9.9 (n=158)	*	6.7 (n=31)
West South Central	12.6 (n=139)	*	*
Far West	5.5 (n=95)	*	*

\* Sample size too small for any statistically valid comparisons

**Vacancy Rates (%) for Certified/Licensed Phlebotomists (PBT) Staff, Non-Certified/Non-Licensed PBT Staff, and Certified/Licensed PBT Supervisors (n= the Number of Laboratories Represented)**

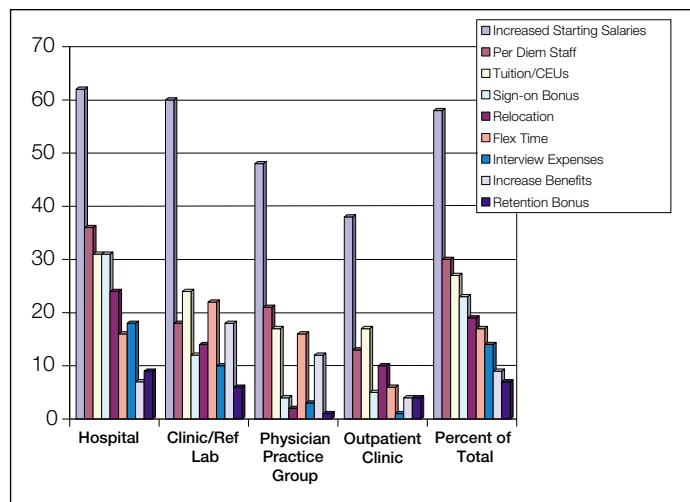
**T7**

Employer Group	Certified/Licensed PBT Staff	Non-Certified/Non-Licensed PBT Staff	Certified/Licensed PBT Supervisor
Total	9.1 (n=749)	11.1 (n=5.4%)	
<b>Lab Type</b>			
Hospital	9.0 (n=516)	5.2 (n=339)	6.4 (n=179)
Private clinic/reference lab	10.6 (n=79)	7.4 (n=42)	*
Private doctors practice group	4.9 (n=130)	6.2 (n=68)	*
Outpatient clinic	*	*	*
<b>Hospital Size</b>			
Less than 100 beds	6.1 (n=218)	3.4 (n=114)	*
100 – 299 beds	14.7 (n=183)	5.4 (n=138)	13.8 (n=63)
300 – 499 beds	8.2 (n=82)	3.8 (n=55)	5.1 (n=55)
500+ beds	6.2 (n=33)	6.1 (n=32)	3.9 (n=38)
<b>Practice Setting</b>			
Rural	8.0 (n=272)	4.5 (n=162)	4.9 (n=40)
Suburbs	11.1 (n=77)	6.5 (n=43)	*
Small/medium size city	9.9 (n=304)	5.7 (n=201)	6.6 (n=105)
Large city	7.1 (n=83)	4.0 (n=46)	10.9 (n=41)
<b>Region</b>			
Northeast	8.0 (n=87)	4.7 (n=49)	3.1 (n=30)
South Central Atlantic	7.8 (n=194)	4.9 (n=105)	7.5 (n=62)
East North Central	8.3 (n=135)	7.8 (n=90)	12.5 (n=37)
West North Central	11.8 (n=73)	4.0 (n=72)	*
West South Central	9.7 (n=122)	5.8 (n=65)	*
Far West	10.3 (n=138)	4.6 (n=80)	6.7 (n=48)

\* Sample size too small for any statistically valid comparisons

**Recruiting and Hiring Practices:** Laboratory managers were asked about practices used to attract and hire new staff. **F1** displays the type of hiring practice and frequency of those practices by laboratory type and for the total sample. Respondents indicated all practices used; therefore, percentages add to greater than 100 percent. The most common practice, used

by more than half of the survey respondents, was to increase starting salaries. Other common practices used to ease staffing difficulties included using per diem or temporary staff (30%), paying tuition and educational expenses (27%), and offering sign-on bonuses and coverage for relocation expenses (23%).



[F1] Percent of laboratories using various hiring practices.

### Reasons for Difficulty in Hiring Laboratory Personnel

T8

Hiring Difficulty	Percent of Respondents
Lower compensation than other careers	68
Increased competition for well-trained staff	59
Applicants lack skills/education	31
Less favorable working conditions	30
Lack of attractiveness of the profession	28

There were differences in hiring practices by type of laboratory. Hospitals and reference laboratories were more likely than outpatient and medical groups to offer increased salaries as a means to recruit new staff. Hospitals were also more likely to offer the more costly incentives such as the use of sign-on bonuses, per diem staff, and relocation expenses. Less than half of the medical groups and outpatient clinic laboratories offered increased starting salaries. These laboratories used assistance with tuition and continuing education, flex time, and more benefits—all of which may be less expensive to offer than increasing salaries. About 10% of the medical groups and outpatient clinical laboratories responded that they had not hired any new staff in the past year.

**Hiring Difficulties:** Almost half of all laboratories responded that they were having difficulty in recruiting and hiring clinical laboratory workers. Laboratories in larger hospitals located in sites in the Northeast and North Central areas reported more hiring difficulties than laboratories in other locations. Not surprising, certain shifts are more difficult to fill. Nearly all laboratories, (91%), reported difficulty hiring for at least 1 shift. Night shifts were most difficult to fill (82%) for MT positions while evening shifts were most difficult to fill (72%) for MLT positions.

Respondents tended to agree that the primary reasons for difficulty in recruiting and hiring laboratory staff have to do with competing employment opportunities and higher salaries outside

the laboratory industry. T8 displays the responses to the survey item on reasons for hiring difficulty. Hospitals were more likely to respond that “lower compensation rates as compared to other careers” contributed to hiring problems. Private clinics and reference laboratories attributed competition within the industry for hiring problems. One of the non-recruitment reasons cited for hiring difficulties was the lack of sufficient applicants who met educational and skill requirements. This reason was cited by 50% of the private clinic/reference laboratories and 37% of the medical group laboratories.

**Lost Positions:** A new item in the 2002 survey asked respondents about the number of positions that were eliminated due to inability to fill them. Fifteen percent (15%) of the surveyed laboratories lost budgeted MT positions, 11% lost MLT positions, and 10% lost PBT positions. If testing volume has not changed, some of these positions are likely filled with temporary or per diem workers which may be ultimately more costly to the facility than recruiting or retaining permanent staff.

**Staff Turnover:** Most of the laboratories surveyed responded that turnover rates had not changed in the past year. Results in T9 show whether turnover rates “increased,” “decreased,” or “stayed the same” for the various categories of laboratory workers. About one-third of the laboratories indicated an increase in turnover of PBT staff and about one-quarter indicated that the rate of turnover for MT staff had increased. Survey findings did not indicate that turnover rates had decreased. Less than 10% of the laboratories reported a decrease in turnover rates for any of the key positions.

Turnover rates varied by laboratory type and by geographic region of the country. Increases in turnover rates were reported more often by hospitals in every job category except for CT positions where slightly more private laboratories reported an increase in turnover rates. Increasing turnover rates for PBTs (35%) were essentially the same by facility type with a range of 23% at outpatient clinics to 37% of hospitals reporting this increase. The reasons for the increasing turnover of phlebotomists are unclear but may relate to job moves from one facility to another for even slight pay increases since this is the lowest paid category of laboratory workers. Regionally, increased turnover rates were reported more often in the Northeast and Southeast with fewer respondents in the Central regions stating that turnover rates had increased.

### Summary and Conclusions

The 2002 wage and vacancy survey results show that some easing in the staffing shortage has occurred; however, vacancy rates vary widely depending on the employer type and practice setting. Depending upon the position, many facilities are still experiencing staff shortages in excess of 10%. While the majority of the laboratory facilities studied were able to fill day shifts, laboratory managers reported difficulty in filling shifts for evenings, nights, or weekends. In addition, responses from a broad range of laboratories indicate an increase in the use of per diem staff. Because use of per diem or temporary staff may not be budgeted the same as regular full or part-time

**Amount of Turnovers within the Past 12 Months Compared to 1 Year Ago By Position**

Position	Increased	Decreased	Stayed the Same
Medical technologist staff	26%	10%	64%
Medical technologist supervisor	8%	8%	85%
Medical technologist manager	5%	5%	85%
Cytotechnologist staff	12%	10%	79%
Cytotechnologist supervisor	5%	6%	89%
Histotechnician staff	19%	8%	73%
Histotechnologist staff	19%	6%	75%
Histotechnician/histotechnologist supervisor	5%	7%	88%
Medical laboratory technician staff	20%	8%	72%
Medical laboratory technician supervisor	2%	6%	92%
Phlebotomist staff	35%	10%	55%
Phlebotomist supervisor	8%	6%	87%

staff, the vacancy rates may be underestimated. When the investigators of the 2002 study examined the total number of budgeted positions for all categories in 2002 compared to 2000, there were lower numbers reported in 2002. These positions may have been cut due to hard-to-fill positions and budget constraints. It appears, although not determined by this survey, that clinical laboratory workers are doing more work with fewer staff.

The modest improvements in the vacancy rates identified by this 2002 survey are welcome; however, they may not be enough to off-set the potential long-term shortage of clinical laboratory workers owing to retirements of a majority of the workforce in the next 10 years. Based on demographic data from the ASCP member database, more than 72% of the current laboratory workforce is greater than 40 years of age. Although many accredited laboratory science programs are starting to experience an increase in the number of qualified applicants, others have indicated they still have had difficulty recruiting students.<sup>2</sup> In fact, the Bureau of Labor and Statistics estimates that between 2002 and 2010, 12,200 new MT and MLT graduates will be needed each year to meet the demand of laboratory services as the American population ages.<sup>3</sup>

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