A Prospective Study of Career Patterns of Medical Technologists: Preparation and Entry-Level Practice

Barbara M. Castleberry, Ph.D., MT(ASCP)
Vice President
ASCP Board of Registry
Chicago, Illinois

Abstract: In 1994, the American Society of Clinical Pathologists - Board of Registry (ASCP-BOR) began a 10-year prospective longitudinal study of the career patterns of medical technologists. A sample of individuals who took the August 1993 Medical Technologist certification examination was selected to be surveyed annually from 1994 to 2003. The study design includes the annual collection of demographic data such as employment status and personal status. In addition, topics have been identified for more in- depth study on a rotational basis each year. These include specific responsibilities, job satisfaction, professional activities, non-salary benefits, career commitment, and efficacy outcome.

Job responsibilities and educational preparation were focus areas for Year One of the study. The ASCP-BOR mailed 2,002 surveys to individuals who took the August 1993 medical technologist examination. 1,156 usable surveys, a 57.7% rate of return, were assessed with respect to first-year job responsibilities and quality of educational preparation to perform each job responsibility. Overall, respondents rated educational preparation as excellent for areas of responsibility performed with greatest frequency.

This longitudinal national study provides an opportunity to evaluate factors which influence the career patterns of medical technologists. The survey can serve as a vehicle to collect data and information on the evolution of skills and responsibilities of medical technologists as they adjust to the changing environment in health care delivery.

In 1994, the American Society of Clinical Pathologists - Board of Registry (ASCP-BOR) began a 10-year prospective longitudinal study to develop description information on the career patterns of medical technologists. A sample of individuals who took the August 1993 Medical Technologist certification examination was selected to be surveyed annually from 1994 to 2003.

Study Design

The study design includes the annual collection of demographic data such as employment status, job title, department, institution type, institution setting, salary, advanced education, and marital status. In addition, topics have been identified for more in-depth study on a rotational basis each year (Table 1). These include specific responsibilities, job satisfaction, professional activities, non-salary benefits, career commitment, and efficacy outcome.

- **Specific responsibilities** include technical skills, knowledge base, judgment and analytical decision making, teaching and training, supervisory management and administration, and communications.

Demographics	Specific Responsibilities	Job Satisfaction	Professional Activities	NonSalary Benefits	Career Commitment	Efficacy Outcome
1993	1993	1993				
1994			1994	1994	1994	
1995	1995	1995				
1996					1996	1996
1997	1997		1997	1997		
1998		1998			1998	
1999	1999		1999			1999
2000		2000		2000	2000	
2001	2001		2001			
2002		2002			2002	2002

Table 1. Matrix of Survey Topics by Year of Survey

- **Job satisfaction** covers personal fulfillment, relationship with coworkers and supervisors, benefits, job security, monetary rewards, recognition, and promotional opportunities.[1]

- **Professional activities** include professional organizational memberships, professional organizational activities, continuing education activities, research activities, and community service.

- **Non-salary** benefits include vacation, sick leave, pension, child care, educational support, and insurance.

- **Career commitment** is designed to gauge the individual's long term commitment to the "profession" as distinguished from one's satisfaction or commitment to a single organization and the expected utility of one's present job for future attainment of valued career outcomes.[2]

- **Efficacy outcome** is the ability of the individual or the department in which they work to accomplish the tasks to be done.[3] This includes scales on personal efficacy beliefs, personal outcome expectancy, collective efficacy beliefs, and collective outcome expectancy.

Study Population

The ASCP-BOR mailed 2,002 surveys to individuals who took the August 1993

medical technologist examination. A total of 1,156 usable surveys were returned, yielding a 57.7% response rate. (Table 2)

Frequency of Tasks Performed

Specific responsibilities on the job and educational preparation for the job were focus areas for Year One of the study. The job responsibilities consisted of a 30-item list of tasks divided into six board categories: technical skills; knowledge base; judgment and analytical decision making; teaching and training; supervision, management, and administration; and communication. The responses were assessed with respect to frequency with which respondents indicated they performed certain tasks. Table 3 lists the tasks most frequently performed. Table 4 lists the tasks least frequently performed.

Preparation for Entry Level Practice

Respondents were also asked to rate the quality of their educational preparation to perform each job task. Overall, respondents rated educational preparation as excellent for areas of responsibility performed with greatest frequency (Figure 1).

Comment

The responses to an annual survey of a cohort of medical technologists conducted over 10 years will form the basis for the developing a series of profiles on the careers of medical technologists. The profiles will include job duties and responsibilities, work patterns, promotion and retention. In addition, the study provides the opportunity to assess the relationship between personal and professional development and other variables such as job satisfaction, career commitment and efficacy outcomes.

References

1 . Spector PE, Measurement of human service staff satisfaction: development of the job satisfaction survey. *American Journal of Community Psychology* 1995; 13:693-713.

2. Blau GJ, The measurement and prediction of career commitment. *Journal of Occupational Psychology* 1985;58:277-288.

3. Riggs ML, Workaway J, Babasa B, Betancourt R, Hooker S. Development and validation of self-efficacy and outcome expectancy scales for job-related applications. *Educational and Psychological Measurement.* 1994;54:793-802.

1993 Examinees	Training Route*	Experience Route(s)**	Total
Sample	1,797	205	2,002
Responses	1,027	129	1,156 (57.7%)

* Baccalaureate degree and completion of NAACLS accredited Medical Technologist program
**Baccalaureate degree and 3-5 years clinical laboratory experience

Table 2. Sample Population and Response Rates: Year 1

1. Maintain confidentiality of test results
2. Perform routine laboratory tests
3. Recognize normal and abnormal values
4. Perform preventive maintenance
5. Correlate abnormal values with disease status
6. Recognize problem in quality control results
7. Perform quality assurance activities
8. Perform specialized laboratory tests
9. Communicate technical information to medical and laboratory persons
10. Troubleshoot laboratory instruments

Table 3. Most Frequently Performed First-Year Tasks

1. Work with legislative activities
2. Prepare and present lectures
3. Supervise laboratory projects
4. Purchase reagents
5. Evaluate educational programs
6. Supervise laboratory personnel
7. Establish technical procedures
8. Select new instruments and reagents
9. Perform utilization studies
10. Develop manuals, etc.

Table 4. Least Frequently Performed First-Year Tasks

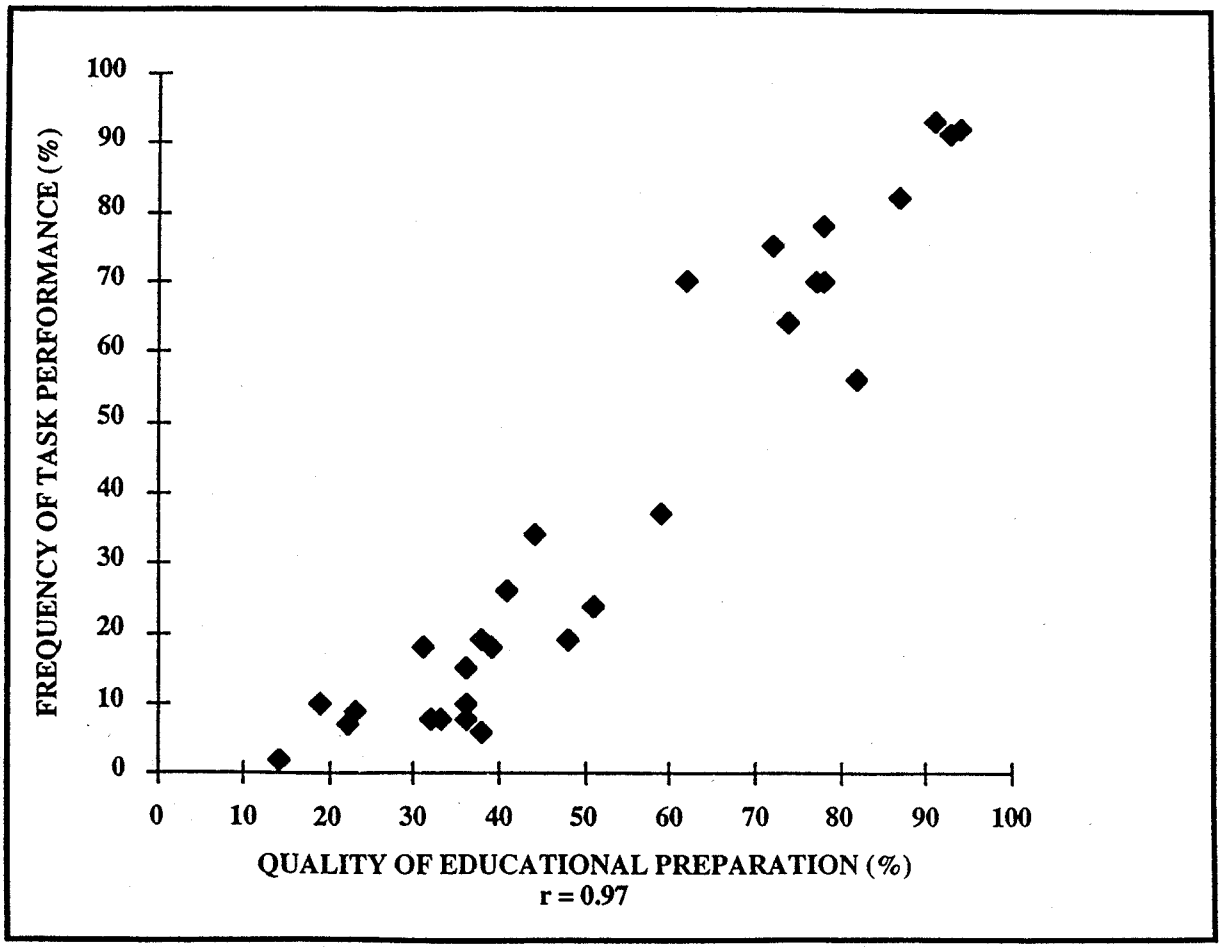

Figure 1. Educational Preparation vs Entry-Level Practice