

DLM PRACTICE ANALYSIS REPORT

For Development of

DLM(ASCP)

Content Guideline and Examination

for DLM Exam Publication January 1, 2017

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INTRODUCTION

The purpose of conducting a practice analysis (a.k.a. job analysis or job task analysis) is to provide the foundation of a certification examination by defining practice in a profession. The practice analysis provides evidence of content validation. It is required by psychometric standards and is considered best practices for high-stakes examination development. It also ensures the certification examination is fair, valid, job-related, and most importantly, legally defensible (Chinn and Hertz 2010)¹. The ASCP Board of Certification (BOC) conducts a practice analysis approximately every five years in accordance with ASCP BOC Policy and requirements of the accrediting body, ANSI (American National Standards Institute), under ANSI/ISO/IEC 17024:2012.

A practice analysis is a formal process for determining or verifying the responsibilities of individuals in the job/profession, the knowledge individuals must possess, and the skills necessary to perform the job at a minimally competent level. The practice analysis process provides a complete and modern understanding of the duties and functions of practicing laboratory professionals. The results of the practice analysis inform the specifications and content of the ASCP BOC certification examinations. The practice analysis process ensures that the examinations are reflective of current practices. It also helps guarantee that individuals who become certified are current and up-to-date on the state of laboratory management practice and are competent to perform as certified laboratory professionals.

PRACTICE ANALYSIS PROCESS

ASCP BOC conducted a practice analysis survey to inform the Diplomate in Laboratory Management (DLM) certification examination category.

The process for conducting a practice analysis consists of the following steps:

1. Survey Development
2. Demographics
3. Task Inventory – Knowledge and Skill Questions
4. Rating Criteria
5. Survey Construction
6. Pilot Testing and Revision
7. Survey Distribution
8. Survey Analysis
9. Committee Review and Discussion
10. Examination Content Guideline, Standard Setting, and Exam Publication

SURVEY DEVELOPMENT

During the 2015 ASCP BOC examination committee meeting, the Laboratory Management Examination Committee provided the input and discussion to develop a practice analysis survey. The committee members (subject matter experts) collectively discussed all pertinent aspects of their profession to design a concise survey to extract useful feedback from field professionals while maximizing response rate. The survey had two main components: demographics and task inventory with appropriate rating scales for each.

DEMOGRAPHICS

¹ Chinn, R.N., and N.R. Hertz. 2010. *Job Analysis: A Guide for Credentialing Organizations*. Lexington: Council on Licensure, Enforcement and Regulation (CLEAR).

The demographic questions asked about experience, education, gender, age, titles, work shift, type of facility, areas of lab work, work hours, etc. The purpose of these questions was to aid the committee in deciding whether the sample of respondents obtained was representative of the profession in general. The demographic data provided analytic categories that allowed refinement of the survey population to utilize only those responses from individuals at the targeted professional level.

TASK INVENTORY – SKILL QUESTIONS

The committee developed a series of job-related task questions that formed the body of the survey.

The survey had four major sections:

- Financial Management
- Operations Management
- Personnel Management
- Quality Management

RATING CRITERIA

The rating scale used for the skill-related tasks assessed whether respondents performed the specific task or not in their jobs. If not, respondents indicated whether or not they were expected to have knowledge of the concept or protocol.

SURVEY CONSTRUCTION

The practice analysis survey was created and delivered through Key Survey, an electronic survey vendor from Highroad Solution. Using an electronic tool allowed survey review and testing via the internet, email tracking of respondents using email addresses, and the ability to send email reminders for completion of the survey.

PILOT TESTING AND REVISION

The Laboratory Management Committee tested a pilot version of the survey. They reviewed and revised different aspects of the survey (e.g., information correctness, grammar/spelling errors, electronic glitches, correct survey branching, etc.). The pilot testing comments and edits informed the final version of the survey.

SURVEY DISTRIBUTION

The Laboratory Management Committee determined that the survey should be sent to all current DLM certificants in the ASCP BOC Personify database. The survey was open for a four-week period between February 9, 2016 – March 7, 2016. ASCP BOC staff also directly emailed the survey to the Laboratory Management Committee and encouraged the committee membership to disseminate the survey to their colleagues. Additionally, the survey link was posted on ASCP social media sites (e.g., Facebook and Twitter).

SURVEY ANALYSIS

The respondents were asked to answer all questions and rate all tasks in the survey. The tasks were divided amongst four major sections (Financial Management, Operations Management, Personnel Management, and Quality Management).

Any individuals not currently practicing (e.g., retired, unemployed, or simply not working in laboratory management) were removed from the practice analysis survey.

COMMITTEE REVIEW AND DISCUSSION

During the 2016 examination committee meeting, the Laboratory Management Committee reviewed the practice analysis results. They agreed that the demographic results accurately reflected the DLM population (**Appendix A**).

In general, tasks performed by at least 40% of the respondents were retained on the task list and considered valid to be on the examination. The committee reviewed all tasks performed by less than 40% of the respondents. If the committee determined that these tasks were critical to patient care and/or were up-and-coming in practice, then the task was retained on the task list and considered valid for the examination. If the task was considered outdated or too esoteric, then it was removed from the task list and the exam. The committee decisions were compiled into the Final Task List for DLM (**Appendix B**) which informed the exam content guideline and the content for the certification exam.

EXAMINATION CONTENT GUIDELINE, STANDARD SETTING, AND EXAM PUBLICATION

The committee revised the DLM exam content guideline to reflect the practice analysis results. They reviewed the exam content area percentages and decided where to set them based on the results of the practice analysis. The committee reviewed the exam database according to the new content guideline and deleted or revised questions accordingly. They wrote new questions to fulfill the new content guideline, and reclassified questions according to the new guideline. After this work was completed, the committee set a new standard for the exam, and the new exam database was published.

DIPLOMATE IN LABORATORY MANAGEMENT (DLM) DEMOGRAPHIC ANALYSIS

Total respondents: 326

Total usable: 232

Usable individual respondents met the following criteria:

- Currently employed in a supervisory or managerial role in a clinical laboratory, blood/donor center, or research facility

Summary:

- Certifications: individuals may have multiple credentials
 - 22% are DLM certified
 - 76% are MLS certified
 - 13% are MLT certified
 - 6% are SBB certified
 - 5% are CG certified
- Education:
 - 4% have an associate degree
 - 57% have a baccalaureate degree or post-baccalaureate program certificate
 - 39% have a master's degree or higher
- Experience:
 - 28% have 10 years or less
 - 22% have 11 – 20 years
 - 50% have 20 or more years
- Geographic Distribution: there are respondents from across the U.S., and states with the highest response rate include:
 - 7% each from California, Florida, and Pennsylvania
 - 5% each from Michigan, Texas, and Tennessee
 - 4% from New York
- Facility:
 - 66% work in hospitals
 - 13% work in independent labs
 - 8% work in physician offices/clinic laboratories
 - 13% work in other facilities
- Age:
 - 3% are younger than 30 years of age
 - 68% are between 30 – 59 years of age
 - 29% are over 60 years of age
- Gender:
 - 75% are female
 - 25% are male

DIPLOMATE IN LABORATORY MANAGEMENT (DLM)

FINAL TASK LIST (TOPICS KEPT ON EXAM BASED ON PRACTICE ANALYSIS RESULTS)

FINANCIAL MANAGEMENT
1. Budget preparation
2. Budget management
3. Capital equipment acquisition
4. Cost analysis (e.g., new tests, setting charges)
5. Materials management (e.g., purchasing, inventory)
6. Financial accounting (e.g., general ledger, accounts receivable/payable)
7. Utilization/Reimbursement management
8. Labor resource management (e.g., position budgeting, overtime management)
9. Contract negotiations (e.g., HMO, vendor)
10. Cash flow analysis
11. Billing
OPERATIONS MANAGEMENT
12. Safety and emergency management
13. Intra/Interdepartmental relations (e.g., organizational committees, safety committees)
14. Information technology (i.e., development, implementation, integration, and maintenance)
15. Facilities management (e.g., space allocation, laboratory design, utilities)
16. Data management (e.g., research and outcomes)
17. Development and evaluation of new technology
18. Validation and/or development of new tests
19. Strategic planning and growth
20. Communications (e.g., other departments, vendors)
21. Consumer relations and customer service
22. Market research and planning
23. Productivity assessment
PERSONNEL MANAGEMENT
24. Recruiting and hiring
25. Personnel engagement (e.g., motivation, employee recognition)
26. Staffing and scheduling

27. Evaluations
28. Competency Assessments
29. Performance management (e.g., coaching, counseling, disciplinary action)
30. Succession planning and staff development
31. Education and training / continuing education
32. Job descriptions (i.e., development and maintenance)
33. Wage and salary administration
34. Personnel regulatory compliance (e.g., CLIA, FMLA, ADA, FLSA, EEOC, etc.)
35. Conflict resolution
QUALITY MANAGEMENT
36. Performance improvement (e.g., general, Six Sigma, Lean, ISO)
37. Regulatory compliance and licensure
38. Accreditation compliance
39. Risk management / medical-legal issue management
40. Writing and implementing a quality plan