Members of the APHL Laboratory Systems and Standards committee developed this quality manager learning ladder as a skills and training guide for those who are either new in their position or have been in the quality manager position for a few years. While this list is not all-encompassing, it can be used as a starting point. Laboratory quality professionals should consult with their supervisors to ensure they are receiving all the training they need for the skills related to their specific position at the public health laboratory.

**ASSUMPTIONS**

- **Laboratory Experience**
  The training ladder assumes individuals being hired already have some regulated laboratory experience, ideally three to five years. If that is not the case, the supervisor should reevaluate their new quality assurance employee’s training plan and consider incorporating more basic laboratory-related activities, such as shadowing various testing sections, observing audits, watching training videos offered on CDC TRAIN and APHL.org, etc.

- **Quality Improvement Knowledge**
  It is also assumed that the individual has demonstrated knowledge of quality improvement concepts and processes through a quality improvement-related project, SOP, etc.

**YEAR ONE**
The quality assurance employee should have exposure, knowledge and/or familiarity with the following by the end of their first year in the position:

- External websites (regulatory, APHL, federal, etc.)
- Where regulatory or accreditation agency quality-related resources and tools are located online
- Internal websites
  - State, county, city, and organizational policies
  - Laboratory’s quality policies
- Both organizational and laboratory-specific conflict-of-interest, data integrity, ethics rules
- Laboratory cycle: pre-analytical, analytical, post-analytical
- Laboratory’s record retention policies (e.g., physical and electronic storage, storage process)
- Internal and external laboratory system partners (e.g., APHL’s Laboratory System Improvement Program activities and reports)
- Laboratory’s quality manual
- CLSI’s Quality System Essentials (QSEs)
- Document control system
- Laboratory’s paperless systems
- Observing the laboratory’s internal audit process
- Tracking performance indicators
- Standard Operating Procedures (SOPs) requirements, structure, etc.
- Assisting with tracking related to proficiency and competency testing
- Assisting with non-conforming event reviews
- Assisting with conducting quality assurance training
- Participating in quality assurance listserv(s)
QUALITY ASSURANCE SPECIALIST/OFFICER LEARNING LADDER

YEARS TWO TO FIVE
The quality assurance employee with two to five years of experience will have experience with the topics/trainings in the above section, but will be expected to learn about other specialized areas.

Areas of Specialization

Leading the laboratory internal audits, including organizing, reporting, following-up
Leading the laboratory’s quality committee
Participating in other committees and workgroups, such as the safety committee
Writing summary reports, providing metrics and/or developing new performance indicators
Leading the process of SOP writing, reviewing, editing
Proficiency testing life cycle
Competency testing life cycle, including verifying and/or helping the laboratory with the tracking
Leading root cause analyses on non-conforming event audits
Leading and performing quality assurance training for staff, and identifying training needs
Leading 5S projects
Consider completing certification on Lean Six Sigma or other quality-related training
Participating in external training and/or meetings with laboratory system partners
Leading the tracking documents, trends, corrective actions, and other quality data
Participating in the budgeting and hiring process as requested
Answering questions related to the laboratory’s quality assurance policies and procedures

Suggested Training for Quality Assurance Managers

APHL Laboratory Training Program

Basic data integrity and ethics
Problem-solving:
  Root cause analysis
  Non-conforming events
  Coaching staff through problems
Quality improvement and change management training:
  Basic Lessons in Laboratory Quality Control: QC Workbook
  Understanding Effective Public Health Laboratory Practices Across Generations
  How to Write a Laboratory Quality Manual
  Laboratory Internal Audit Plan
  Crosswalk of Regulations And Guidance Affecting Laboratories—Sorted by QSE
  Considerations for Maintaining Laboratory Quality During the COVID-19 Pandemic
  CMS’s Quality, Safety & Education Portal (QSEP)
  Conducting Successful Audit Interviews

Communication:
  Coaching
  Team communication
  Writing
  Meeting facilitation
  Customer service, such as addressing internal and external partner needs, technical assistance, serving as a reference, etc.
  How to have a difficult conversation
  Emotional intelligence
  Receiving feedback
  Storytelling

Mental health first aid or equivalent
HIPAA and privacy requirements
Incident command
Regulations such as CLIA, CAP, TNI, etc.
National and regional trainings from health and/or appropriate agencies

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