

# EQAsia

## Laboratory personnel Management



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# House keeping rules



Please turn off your microphones – this will help with bandwidth and maximize audibility.



Do frequently use the chat function to share your views, comments and challenges. Keep the chat constructive, respectful and on topic!



If you would like to ask questions, please type them in the chat box



Please note that we will record the session to maintain a record of the questions asked and to distribute it to the laboratory team for future reference.

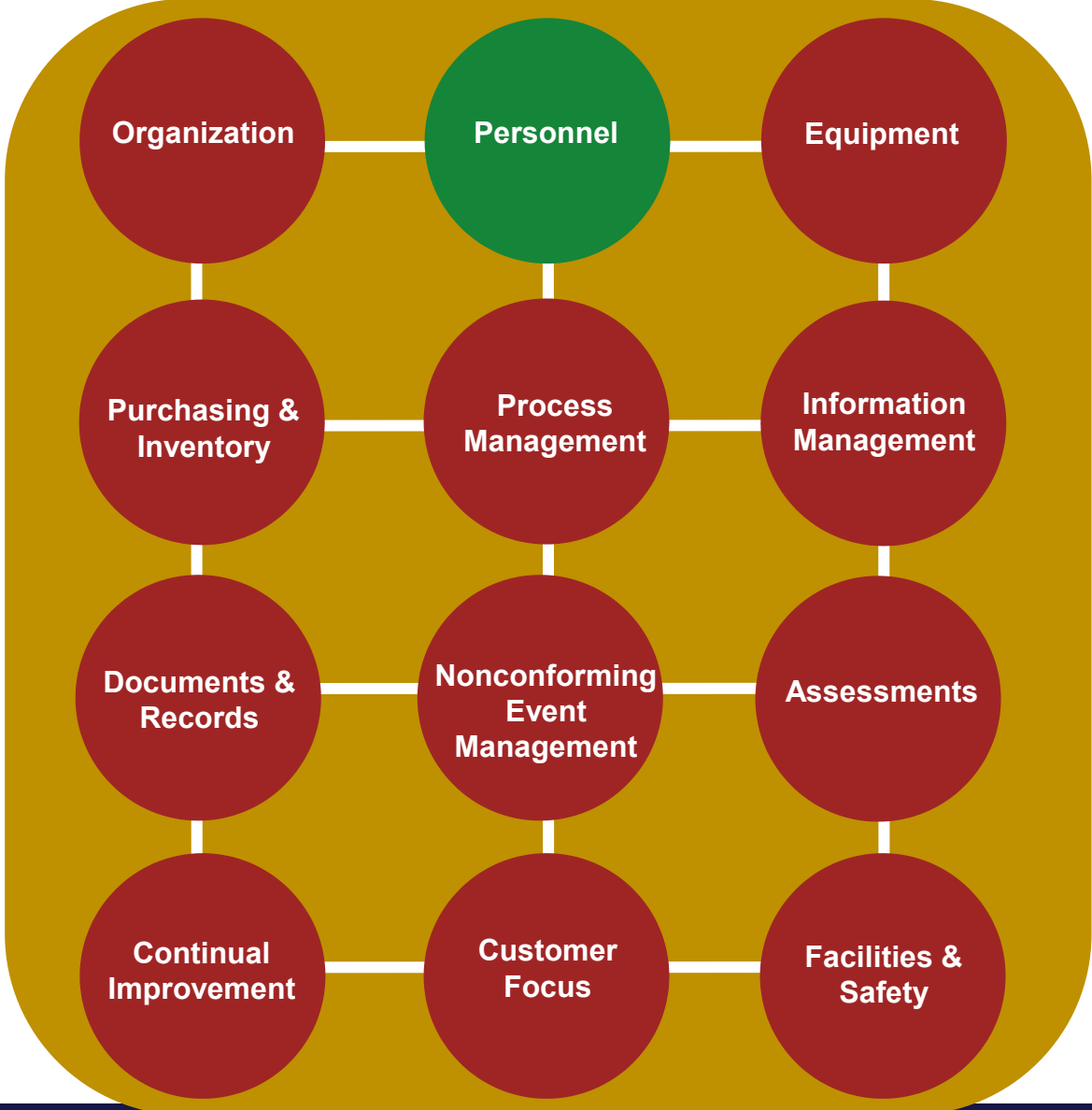
# Agenda

S/N	Topic	Time	Expected Duration
1	Welcome	3:00- 3:05 pm	5 min
2	Presentation on personnel management	3:05-3:35pm	30 min
3	Quiz questions and case studies	3:35-3:40pm	10 min
4	Q/A session	3:40-4:00pm	15 min

# Objective

- Explain the role of personnel to a QMS.
- Discuss key personnel management activities that fulfills the quality requirements of the laboratory.
- Describe maintenance of personnel records to support quality and compliance

# The Quality Management System



# Personnel management

- Personnel are the most valuable resource of any organization and critical to the implementation of the quality management system in the laboratory.
- They are involved in laboratory activities across the entire path of workflow
- Therefore, the laboratory management needs to ensure that:
  1. Processes and procedures for managing personnel are effectively implemented to support the:
    - Laboratory QMS
    - Overall quality and service goals of the laboratory
    - Laboratory path of workflow
  2. An adequate number of qualified personnel are available to produce high-quality laboratory services.



# Personnel management

- Recruiting qualified personnel is essential to ensure laboratory quality and reliability of the test results.
- Failing to verify education qualification and references for new hire may lead to problem in the future.
- **As a laboratory director it is important to:**
  - Hire an appropriate number of staff to cover workload.
  - Verifying eligibility, applicant education, and credentials.
  - Develop clear and comprehensive job descriptions for each employee.
  - Provide orientation and on-the-job training for new staff.
  - Conduct and document competency assessments on all personnel.
  - Provide opportunities for continuing education.
  - Conduct annual employee performance appraisals.

# Personnel management

➤ **As Quality Manager it is necessary to :**

- Ensure employees receive proper orientation and training.
- Keep track of employee records and make sure they are confidential.
- Include policies relevant to personnel in the quality manual.

# Personnel management

- **As Laboratory personnel it is necessary to:**
  - Participate in training and continuing education opportunities.
  - Request additional training when needed.
  - Maintain records of personal professional development.

➤ **Personnel Management :**

- Describes the elements of obtaining and retaining an adequate number of qualified, well-trained, and competent laboratory personnel to perform and manage laboratory activities



## Personnel Qualification

- Laboratory management needs to determine appropriate personnel qualifications for all positions in the laboratory .
- Qualifications need to meet regulatory and accreditation requirements, which are set at the minimum acceptable level.
- Essential personnel qualifications include:
  - Education
  - Licensure, certification, and registration
  - Job-specific skills, training, and previous experience
- Job qualification should be documented ( e.g., job description) and kept current

# Personnel management

## 2. Job description

***ISO 15189 stated that “Laboratory Management shall have job descriptions that describe responsibilities, authorities and tasks for all personnel”***

- Each job description needs to include information highlighting the knowledge, skills, and attitudes specifically required for the position
- All personnel including laboratory directors, managers, supervisors, and consultants must have a signed and dated job description that has been reviewed and approved by both the employee and their supervisor.
- The laboratory should develop and maintain a standardized, controlled template for creating job descriptions to ensure consistency and compliance.
- Job descriptions must be updated when employee’s roles or responsibilities change.
- The updated job description must be signed by both the employee and the line manager and filed in the employee’s personnel record.

### 3. Orientation

#### Orientation

➤ The process of introducing new staff to the organization, the laboratory facility, the term and condition of job and safety protocols.

***Orientation is different from training.***



## Orientation

- Orientation should include:
  - An introduction to the overall laboratory and specific laboratory sections where the staff will work
  - A tour of the laboratory facility and introductions to relevant staff and supervisors.
  - The laboratory QMS, including path of workflow.
  - Personnel policies including ethics, confidentiality, employee benefits, and work schedules
  
- The laboratory should have well-designed forms and/or checklists to document.
- Upon completion, the employee and his or her supervisor should review the documentation to ensure there are no areas that need additional emphasis
- Both the employee and the supervisor should sign and maintain the original documentation in the employee's personnel record

## 4. Training

- Following orientation, an employee needs to be trained in the processes and procedures in which he or she will work.
- Job training is an organized learning activity conducted in the work environment that provides information and knowledge needed for a specific position
- It is more involved and comprehensive than orientation and should include training in all applicable pre-examination, examination, and post examination activities applicable to a specific position.
- Regulatory and accreditation requirements specify that training is required:
  - For newly hired, transferred, or promoted personnel
  - When organizational or technological changes affecting work processes or procedures are implemented
  - When an employee demonstrates repeated performance problems or unsuccessful performance on a competence assessment exercise

## 4. Training

- Successful training occurs when the employee apply the information and knowledge on the job and meet employer expectations for the performance of specific tasks
- The laboratory management should define processes and procedure for staff training including initial and ongoing training requirement
- In order to track progress and successful completion of training requirements, records of training activities need to be maintained for all staff.
- The training record log will include:
  - The training activity,
  - Date of training initiation and completion
  - The name/initials of the trainer and the trainee
- The laboratory needs to maintain initial and ongoing job training records in the employee's personnel record.

## ➤ **Components of the laboratory training program**

➤ Employee training should go beyond routine job task as the laboratory personnels have responsibilities in the following areas.

## ➤ **A comprehensive laboratory training program should include:**

- Quality Management System (QMS)
- Laboratory Information System (LIS)
- Manual and computerized data management
- Health and safety
- Work Processes and Procedures
- Ethics and Confidentiality
- Staff Performance Management

## Stages of a Laboratory Training Program

The training program includes four steps :

- Identifying training needs
- Developing training plan
- Conducting training
- Evaluating training outcomes

# Personnel management

## ➤ How are training needs identified?

### ➤ Training needs may be identified through:

- Post-training learner evaluations
- Competence assessment results
- Findings from internal and external audits
- NCEs
- Customer feedback
- New technologies or industry developments
- Changes in current processes, or procedure
- Returning after extended absence

# Personnel management

## ➤ Develop training plan

- Once training needs are identified, a training plan is developed . The plan should include:
  - Define the objective of the training - what skills the training aims to achieve, what learners should know and be able to do after the session?
  - Determine available resource and training material
  - Methods used for training which includes but not limited to:
    - Live or video demonstration
    - Practice under supervision
    - Learner self-assessment after practice
    - Testing specially provided samples
    - Lecture including small group tutorials

# Personnel management

## Training is conducted

- Once the training plan is developed training is conducted.
- Training is provided individually for new staff or in group settings when introducing new process or procedures, or as part of the routine annual review of current processes.
- Important concepts to consider before training is conducted include:
  - Training schedule
  - Logistics of delivering training
  - Preparation and availability of training materials
  - Trainer selection
  - Recording the training events

# Personnel management

## Training is evaluated

### ➤ The training program is evaluated to:

- Determine whether the learning objectives were achieved
- Assess the value of the training to the organization
- Identify areas for improvement in the training program

### ➤ When to perform the training evaluation?

- **During the training** :- by observing learner participation in exercises, case studies, simulations, etc., and other activities, to assess the degree to which the learners have mastered the content.
- **End of the training**:- by using feedback questionnaires to capture learner reactions to the training
- **After the training**:- by evaluating on-job performance to assess whether new skills are applied effectively (initial and ongoing competence assessment)

## 5. Competency Assessment

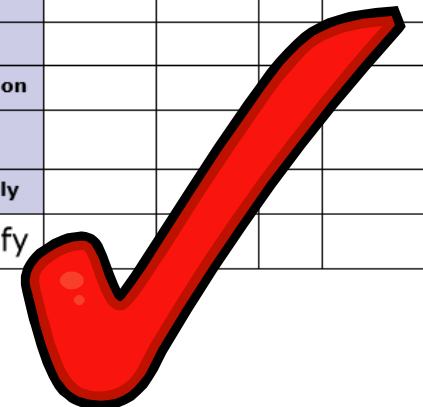
- Competency assessment is the process of verifying that the knowledge, skills, and practices gained through training are effectively applied by the employee in their routine work.
- **When Should Competency be Assessed?**
  - Following training to determine the effectiveness of training and the individual's readiness to function in the work environment independently
  - Periodically through out employment ( as per organization and regulatory requirments)
  - Whenever personnel responsibilities change
  - When there are new or changed processes and procedures
  - After a retraining (i.e., repeated performance problems or failed performance on competency assessment exercise)
- Laboratory management should define the processes for initial and ongoing competence assessment

# Personnel management

## Method of assessment

- Methods of verifying competency in the laboratory should include but not limited to the following :
  - Direct observation of routine work processes and practice
  - Direct observation of equipment maintenance and function checks
  - Monitoring examination result recording and reporting including critical results
  - Review of work records such as worksheets, log sheet and data entry
  - Examination of specially provided samples, such as previously examined samples, (i.e, proficiency testing [PT]) materials
  - Assessment of problem- solving skills

Technologist Name		Technologist Title		
Procedure for Evaluation	Evaluation Date		Evaluator	
Procedure item	Accept	Partial	No	Comment
Read procedure manual				
Equipment set up appropriately				
Work area neat				
Reagent preparation				
Perform task accurately				
Perform task timely				
Other: Specify				



## Competency assessment documentation

- All competence assessment activities must be properly documented using a standardized form.
- The record should include:
  - The date of assessment
  - Name of the assessor
  - Details of observations or reviews conducted and the outcome
- The laboratory needs to maintain initial and ongoing competency assessment record in the employee's personnel record

COMPETENCY ASSESSMENT				
ANALYST NAME _____		TITLE _____		
PERIOD _____	TO _____	DATE DUE _____		
METHOD/PROCEDURE _____				
READING OF PERTINENT PORTIONS OF THE PROCEDURE MANUALS	YES	NO	N/A	COMMENTS
DIRECT OBSERVATION				
Safety policies followed				
Preparation of work area				
Work area neat and organized				
Follows policies, procedures and rules pertaining to assignment				
Preparation/handling of specimen				
Preparation/handling of reagents				
Preparation/handling of QC and maintenance activities				
Knowledge of criteria for acceptable specimen unacceptable				

## 6. Continuous education

- Continuous education is an ongoing learning program designed to keep laboratory personnel **up to date** in their knowledge and skills.
- CE enables an individual to gain further skills or knowledge relevant to their line of work.
- Laboratory management should provide CE opportunities that support staff in:
  - Expanding knowledge and skill
  - Maintaining and enhancing job competency
  - Adapting to new technologies and procedures



- CE records should be retained with other personnel records and be readily accessible.

## 6. Continuous education

### Sources of CE includes

- Lectures, seminars, journal clubs, Webinars
- Presentation and review of case studies
- Training on instruments or kits by the manufacturer
- Other structured educational programs relevant to laboratory work

## 7. Performance Appraisal

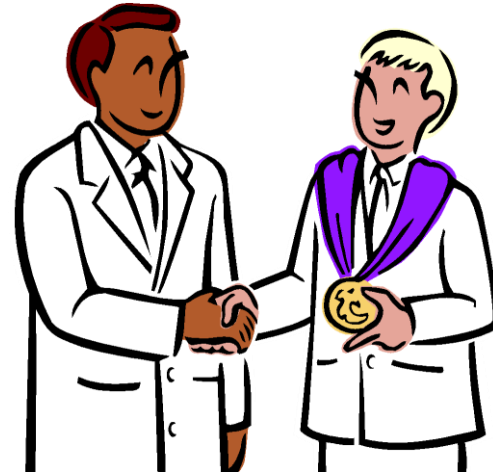
- A performance appraisal is a systematic and periodic process of measuring employee's job performance and contribution to the laboratory.
- It is broader than competency assessment and includes the following elements:
  - Technical competency
  - Efficiency of accomplishing work task
  - Adherence to policies
  - Observance of safety rules
  - Communication skills (including communication to customers)
  - Punctuality
  - Professional behavior
- Laboratory management should document employee performance evaluations and maintain records in each employee's personnel file.

## 8. Personnel record

- Records of the relevant educational and professional qualifications, training and experience, and assessments of competence of all personnel should be maintained
  
- These records should be readily available to relevant personnel and should include but not be limited to:
  - Educational and professional qualifications;
  - Copy of certification or license, when applicable;
  - Previous work experience;
  - Job descriptions;
  - Introduction of new staff to the laboratory environment;
  - Training in current job tasks;
  - Competency assessments;
  - Reviews of staff performance;
  
- The personnel record should be kept in a secure place to protect confidentiality.

# Importance and ways of motivating personnel

- Success in laboratory operations depends on the knowledge, skills, commitment, and motivation of staff.
- Motivated employees are more likely to be committed to their work.
- Elements of motivation includes:
  - Praise and Recognition
  - Bonuses and Incentives
  - Benefits
  - Flexible Work Hours



- The manager can inspire the team by highlighting the value and significance of each person's role.

# Summary

- Personnel are the most valuable resource of any organization and critical to the implementation of the QMS.
- Policies, processes, and procedures needed to implement all key elements of personnel management including job qualification, orientation, training, competency assessment, performance appraisal must be established and effectively implemented.
- When personnel are well-managed, motivated, and competent, the laboratory can consistently deliver high-quality, reliable, and safe services.

# Quizzes and Case studies

# Quiz 1

1. Which of the following is a key component of laboratory personnel management?
  - a) Recruiting and hiring qualified staff
  - b) Providing initial and ongoing training
  - c) Conducting regular competency assessments to ensure staff can perform assigned task
  - d) Maintaining accurate personnel records
  - e) All

2. Which situation requires training?
- a) Staff promotion or reassignment.
  - b) Implementation of new technology.
  - c) Repeated performance errors.
  - d) All.

3. When should the evaluation of a training program be conducted?
- a) During the training
  - b) At the end of the training
  - c) After the training
  - d) All

## Quiz 4

4. To determine whether an employee is capable of correctly performing a specific laboratory examination, the manager should:

- a) Write a job description
- b) Provide orientation on the laboratory's processes and procedures
- c) Review the employee's qualifications
- d) Conduct a competency assessment

## Quiz 5

5. If an employee is experiencing performance problems, the manager should first:
- a) Write a new job description for the employee
  - b) Report the problem to upper management
  - c) Discuss the issue with the employee and evaluate whether retraining is needed
  - d) Terminate the employee

# Case study

1. You are the laboratory manager. One senior technologist has been temporarily reassigned, and another is out sick. The remaining two staff members have not performed malaria smear readings since their initial training several years ago. Today, your lab receives 20 malaria smear requests. Since you cannot ensure accurate testing, you decide to notify test requestors about a delay.

What could have been done to prevent this situation?

- a) Provide regular training and continuing education, including cross-training for critical tasks.
- b) Conduct periodic competency assessments to ensure that staff are competent .
- c) Develop job descriptions that include multiple disciplines and consider regular rotations to maintain skills across different areas
- d) All

## 2. Case study

2. You are the only staff member available to attend an in-service training seminar on instrument maintenance. You are responsible to train your coworkers using your notes from the training and the instrument operator's manual.

What is the first step you should take?

- a) Conduct the training immediately after returning from the seminar
- b) Develop a structured training plan defining the objective, method and material
- c) Assign each coworker to read the manual on their own
- d) Document the training event on the training log

## Case study cont.

2.2. After developing a training plan what is the next step?

- a) Documenting the training and maintaining the training record in the personnel record
- b) Conducting the training
- c) Evaluating the training outcome
- d) Determine available resources and training materials