به نامش که یادش آرامش دلهاست

Quality Assurance In TB Labs

M. Ghalami nobar

TB Lab Expert of H.R.L (M.O.H)

Quality assurance (QA) in Mycobacteriology

Internal Quality Assurance (IQA) or Quality Control

QC: Includes all means by which the TB laboratory controls operations (instrument checks, checking new lots of staining solutions, reagents, media).

External Quality Assessment (EQA) :

participating TB laboratories assess their capabilities through panel testing;

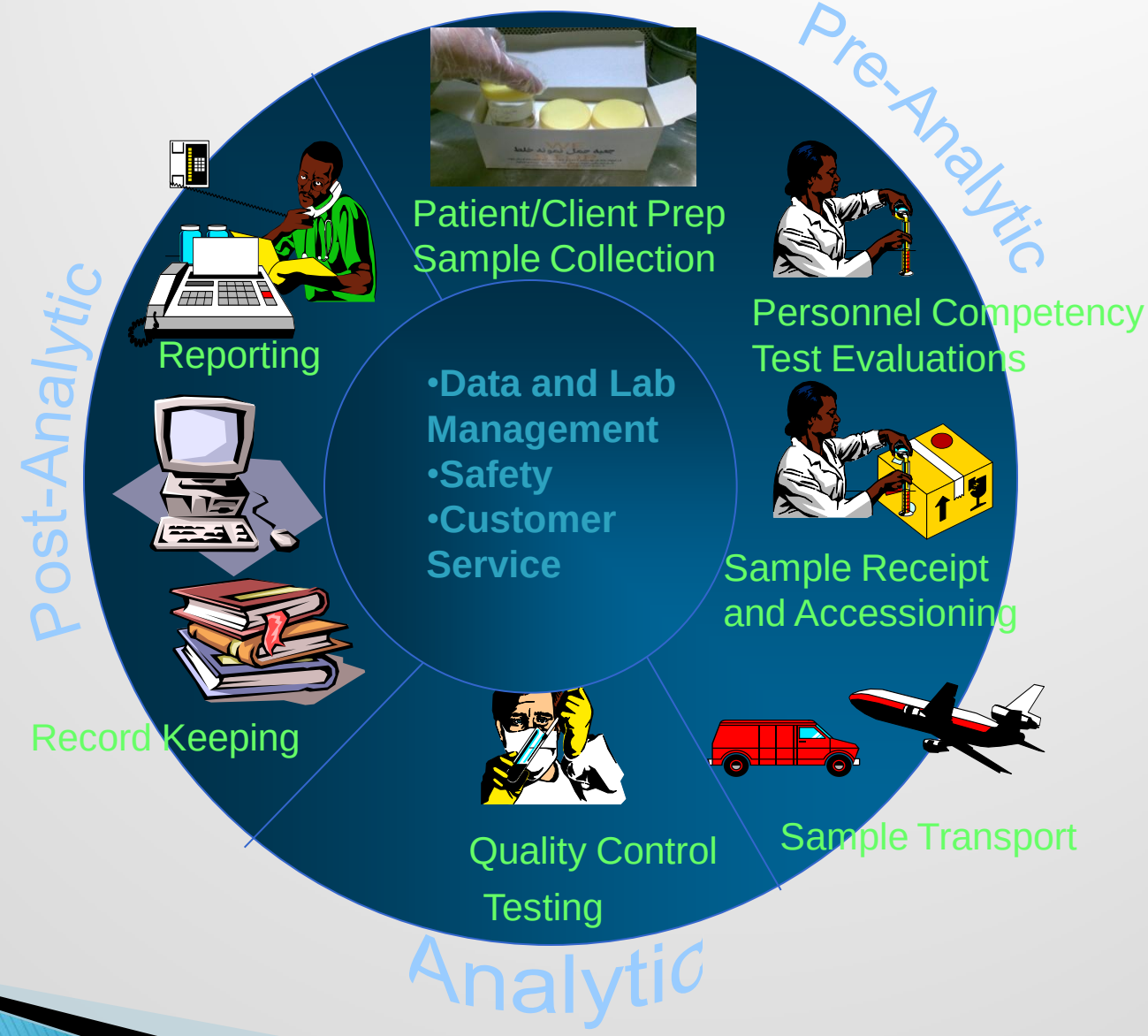
includes on-site evaluation of the TB laboratory.

Quality Improvement (QI) : to permanently remove obstacles to success; involves continued monitoring, identifying defects; followed by remedial action (e.g. retraining); depends on effective on-site evaluation visits.

QA should be applied to:

- Laboratory arrangement
- Human resources (training, health control)
- Laboratory equipment
- Collection and transport of specimens
- Handling of specimens
- Reagents and media
- Culture procedures
- Reporting of results

The Quality Assurance Cycle



The process of quality assurance should be continuous and monitored

Quality assurance should be:

- Practical
- Workable
- Comprehensive

QA – laboratory administration

- Use **Standard Operating Procedures** (SOPs).
- **Keep written procedures** in the laboratory for easy reference.
- **Any changes must be dated** and initialled by the laboratory supervisor.
- **Retain all records for 2 years**.

QA – human resources

- **Adequate number**
- **Training (retraining)**
  - before starting
  - refreshment
  - in case of failure
- **Medical Examination**

QA – laboratory equipment

- Equipment should meet the manufacturer's claims and specifications.
- Equipment should be calibrated.
- Dated service records must be kept for all equipment.
- Equipment must be monitored regularly to ensure constant accuracy and necessary precision.

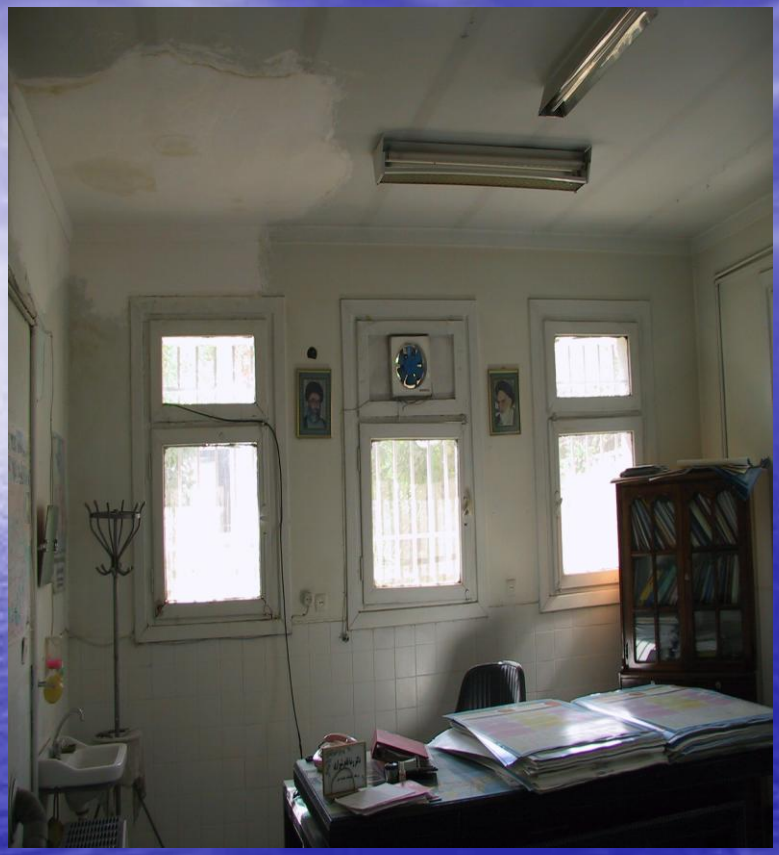
QA – laboratory arrangement

- BSL2/BSL3
- Work areas, equipment and supplies arranged for logical and efficient work-flow **(clean to dirty).**
- Benches swabbed at least once a day with an appropriate disinfectant.
- Doors in the laboratory to be kept closed.

Shiraz DST Lab (2006)

Shiraz DST Lab 2006 (con….)

Shiraz DST Lab 2006(cont…)



Shiraz DST Lab 2012

Microscopy Room

Entrance of DST Lab

Shiraz DST Lab 2012

PCR Section

PCR Section

Shiraz DST Lab 2012

Smear & Culture Preparation Room

Drug Susceptibility Test Room

Many thanks for your attention