Annual on EQA program workshop
QMS (QC/QA) in Cambodia

Introduction of the External Quality Assessment (EQA)

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Outline

- Introduction on quality
- Objectives of the technical area
- JEE Findings
- IHR State Party Self-Assessment Annual Reporting Tool (SPAR) Results
- Introduction to EQA program (Purpose, Objective and Challenges)
- Planned Activities for 2019

What does the word “quality in medical laboratory? ” mean to you?

The Quality is defined as the ability of services to satisfy stated or implied needs of a specific customer

Laboratory quality often refers to accuracy, reliability, and timeliness of the reported test results through the organization assesses the operation of the institution or its programme in order to determine if it meets the agreed upon or predetermined standards

The ways forward for quality on key elements and sustainable national and regional diagnostic system to meet public health need and carry out ?

- Building sustainable for laboratory system
- QA Approaches to Identified Problems

Should be Understand the root causes of a problem BEFORE you put a “solution” into place

Objectives of the technical area

1. Laboratory diagnostic capacity

- Strengthen National laboratory capacity to meet diagnostic and confirmatory laboratory requirements for priority diseases
- Procedures for shipment of infectious substances meet IATA standards for public health events
- National regulations for the packaging and transport of clinical specimens meet international standards
- Develop and strengthen National Laboratory information system
- EQA program for Microbiology is implemented in all Microbiology laboratories
- Laboratory quality is improved through a national harmonized LQMS
- Strengthen laboratory network to support lab capacity development
- Strengthen laboratory capacity for AMR detection

2. Biosafety and biosecurity

- Strengthen biosafety procedures and biorisk management in laboratories to meet international standards
- Strengthen function of the national biosafety committee to mitigation risks in public health laboratory

JEE Evaluation Findings

Indicators with scores

National laboratory system	D.1.1 Laboratory testing for detection of priority diseases	4
	D.1.2 Specimen referral and transport system	2
	D.1.3 Effective modern point-of-care and laboratory-based diagnostics	2
	D.1.4 Laboratory quality system	2

Priorities

- Invest in strengthening and maintaining laboratory fundamentals and laboratory quality management systems.
- Develop a mechanism for standardized procurement of equipment and supplies.
- Describe and test functionality of the specimen referral and transport system, and provide corrective actions.

JEE Evaluation Findings

Indicators with scores

Biosafety and biosecurity	P.6.1 Whole-of-government biosafety and biosecurity system is in place for human, animal and agriculture facilities	**2**
	P.6.2 Biosafety and biosecurity training and practices	**2**

Priorities

- Develop and keep up-to-date a complete inventory of dangerous pathogens stored at facilities.
- Improve facilities to ensure physical containment of dangerous pathogens.
- Develop and roll out a national training curriculum for biosafety and biosecurity.
- Invest in maintenance and servicing of biosafety cabinets, including through training of staff locally.

2018 IHR indicators

Level	C5.1. Specimen referral and transport system	
Level 1	Transportation[40] of specimens from health facilities to reference laboratories for confirmatory diagnostics could be available **on an ad hoc basis**	☑
Level 2	Systems[41] are in place **for less than 50% of all health facilities** to transport specimens to reference laboratories for confirmatory diagnostics	☑
Level 3	Systems are in place for **50–80% of all health facilities** to transport specimens to reference laboratories for confirmatory diagnostics	☐
Level 4	Systems are in place **for at least 80% of all health facilities** to transport specimens to reference laboratories for confirmatory diagnostics	☐
Level 5	Systems are in place to transport specimens to reference laboratories for confirmatory diagnostics **from all health facilities**	☐

2018 IHR indicators

Level	C5.2 Implementation of a laboratory biosafety[42] and biosecurity[43] regime	
Level 1	National laboratory biosafety and biosecurity guidelines and/or regulations are under development	☑
Level 2	National laboratory biosafety and biosecurity guidelines and/or regulations are in place and implemented by some laboratories at the national level	☑
Level 3	National laboratory biosafety and biosecurity guidelines and/or regulations are in place and implemented by all laboratories at the national level	☐
Level 4	National laboratory biosafety and biosecurity guidelines and/or regulations are implemented by all laboratories at national, intermediate and local levels	☐
Level 5	National laboratory biosafety and biosecurity guidelines and/or regulations are regularly reviewed and updated as needed	☐

2018 IHR indicators

Level	C5.3 Access to laboratory testing capacity[44] for priority diseases[45]	
Level 1	Access to laboratory testing capacity with quality assured results[46] is in place only for a minority of the priority diseases	☑
Level 2	Access to laboratory testing capacity with quality assured results is in place for at least five priority epidemic-prone diseases or other public health events	☑
Level 3	Access to laboratory testing capacity with quality assured results is in place for at least 10 priority epidemic-prone diseases or other public health events	☐
Level 4	Access to laboratory testing capacity with quality assured results is in place for at least 15 priority epidemic-prone diseases or other public health events	☐
Level 5	Access to laboratory testing capacity with quality assured results is in place for all priority epidemic-prone diseases or other public health events	☐

What is the purpose of EQA

- EQA is important for improvement of the laboratory **quality management system,**
- **EQA helps to assure customers, such as Physicians, patients, and health authorities, that the laboratory can produce reliable results.**
- Individual laboratories **can use EQA to identify problems in laboratory practices, allowing for appropriate corrective action.**
- EQA participation will help to evaluate **reliability of methods, materials, and equipment, and to evaluate and monitor training impact** for laboratories performing public health-related testing,

- Challenge participants quality systems
- Encourage inter-laboratory comparability
- Provides education stimulus
- Encourages improvement
- Provides insight into national /international levels of performance
- Allows poor performance to be addressed
- Excellent source of reference material
- Required in licensing (accreditation in future plan)

The objective

Improvements the quality of test results for their capabilities and performances by results with use in other labs in the network.

EQA helps to assure customers, such as Physicians, patients, and that the laboratory can produce reliable results.

EQA can help to assure that results from different laboratories during surveillance activities are Comparable.

EQA is important for improvement of the laboratory quality management system, as it is a measure of laboratory performance.

To assess lab performance and the ability to determine the correct results and included PT

The purpose of EQA is to allow for detection of problems in the laboratory, and to, therefore, provide an opportunity for improvement and outcomes to all laboratory staff and to management

An Overview of the EQA Program

Required process to evaluation of EQA data Simplifies by use of statistical control

- Improving test standardization and quality the roles of EQA

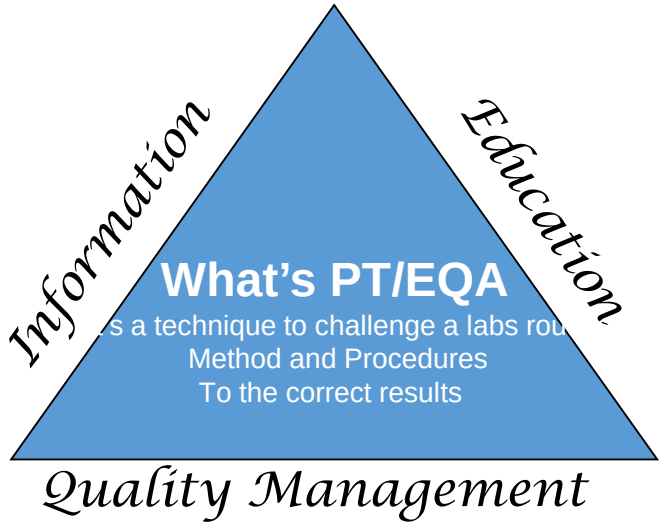
. What do we do
. Why EQA is important in labs process
. Types of error,
. Clinical labs aim to provide and errors rates of percentage in annually

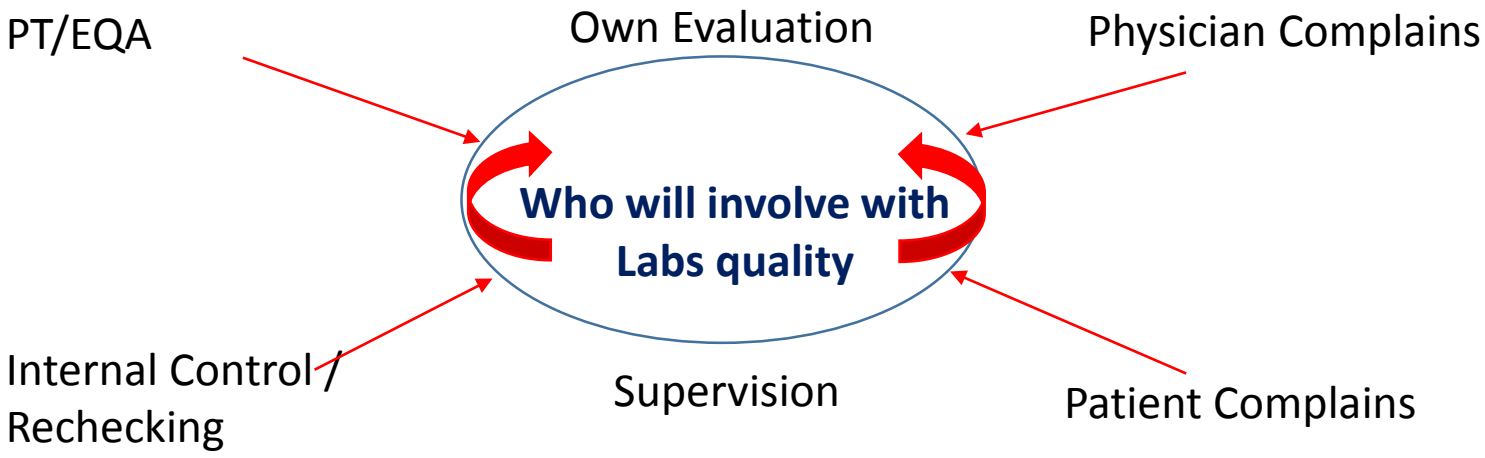
That mean results and its interpretation must be correct

The right test results correctly, Interpreted given to the right patients in the right time

Why we need to monitor quality

- To ensure their information is accurate
- To ensure their information is time
- To ensure their information is appropriate
- To ensure their right is interpretable and provide quality patient care

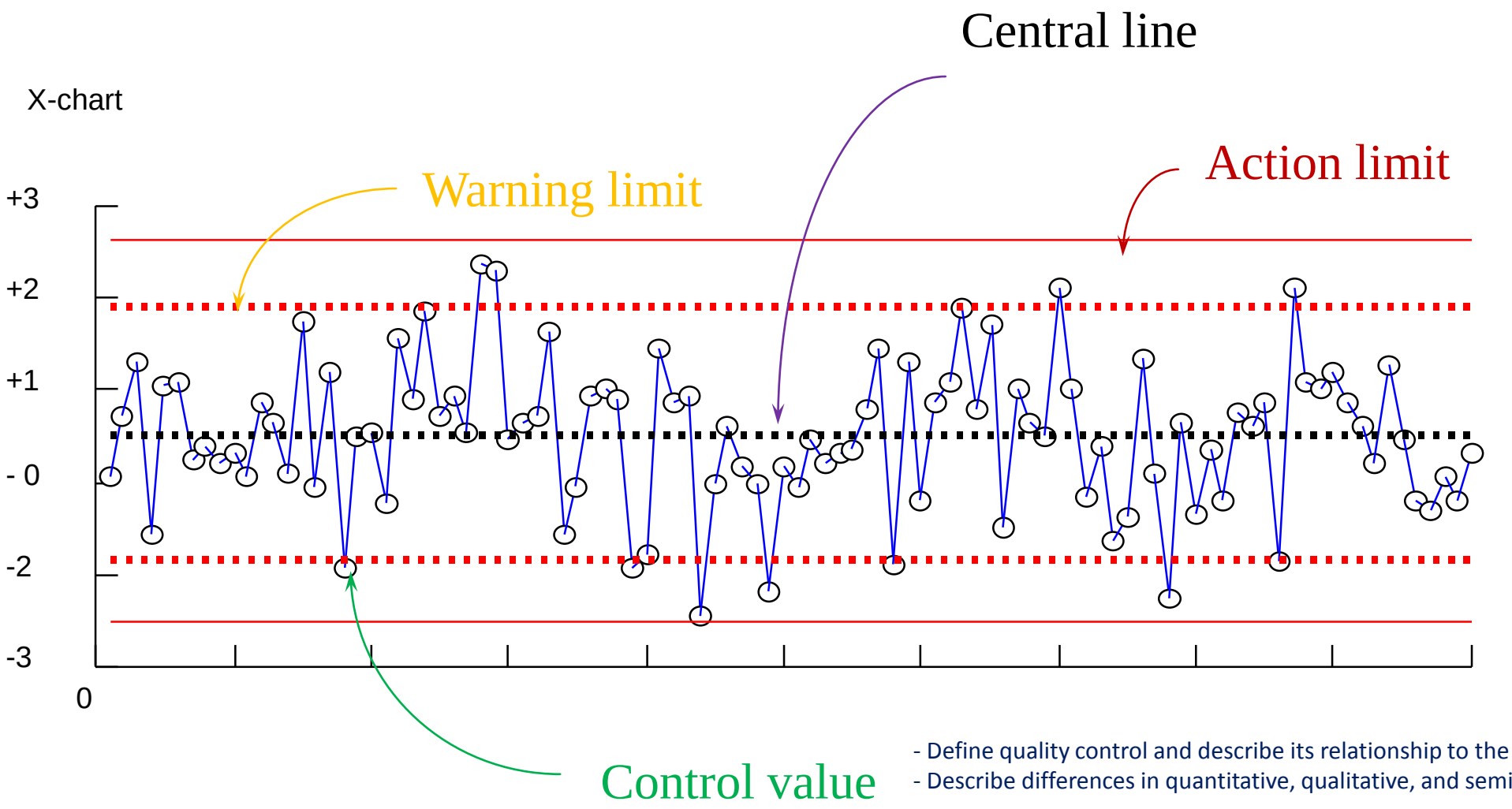




To ensure the public received accurate and useful information

The EQA Program should be
Set indicator for performance and Process evaluation

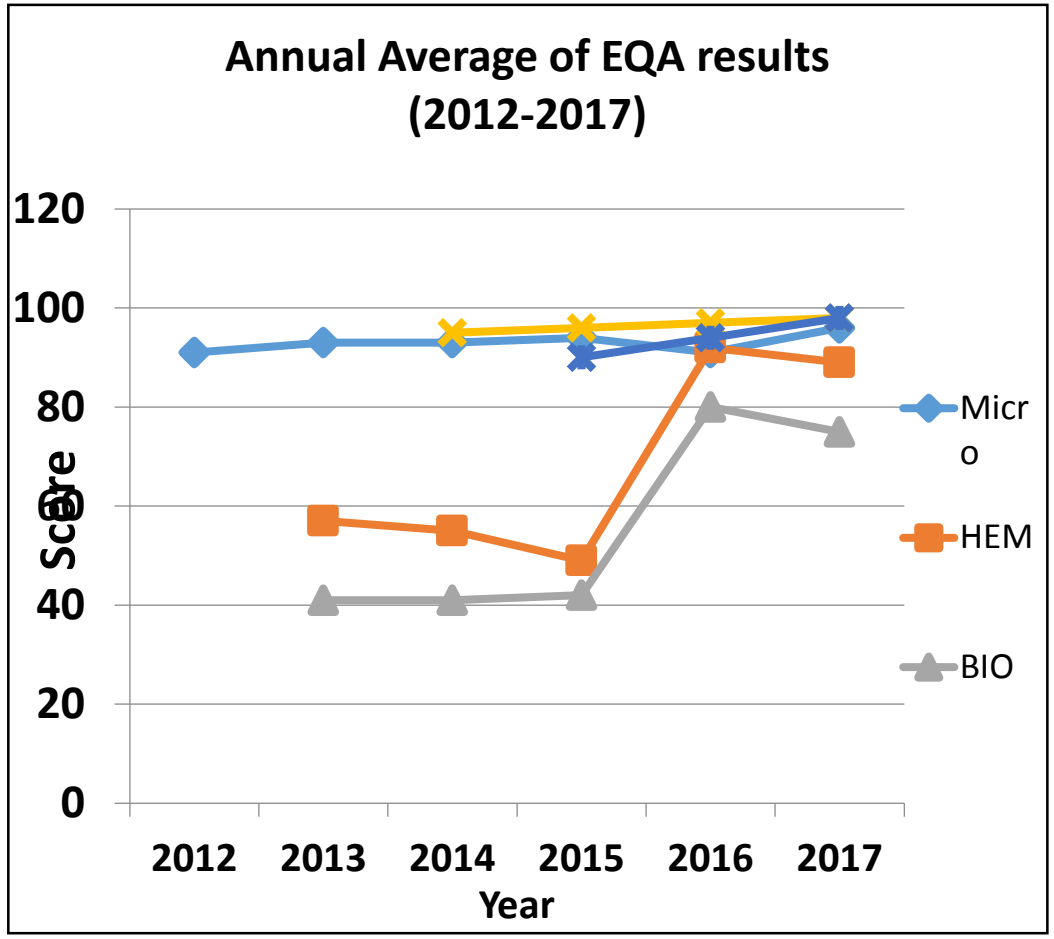
What’s Control chart: illustration of construction

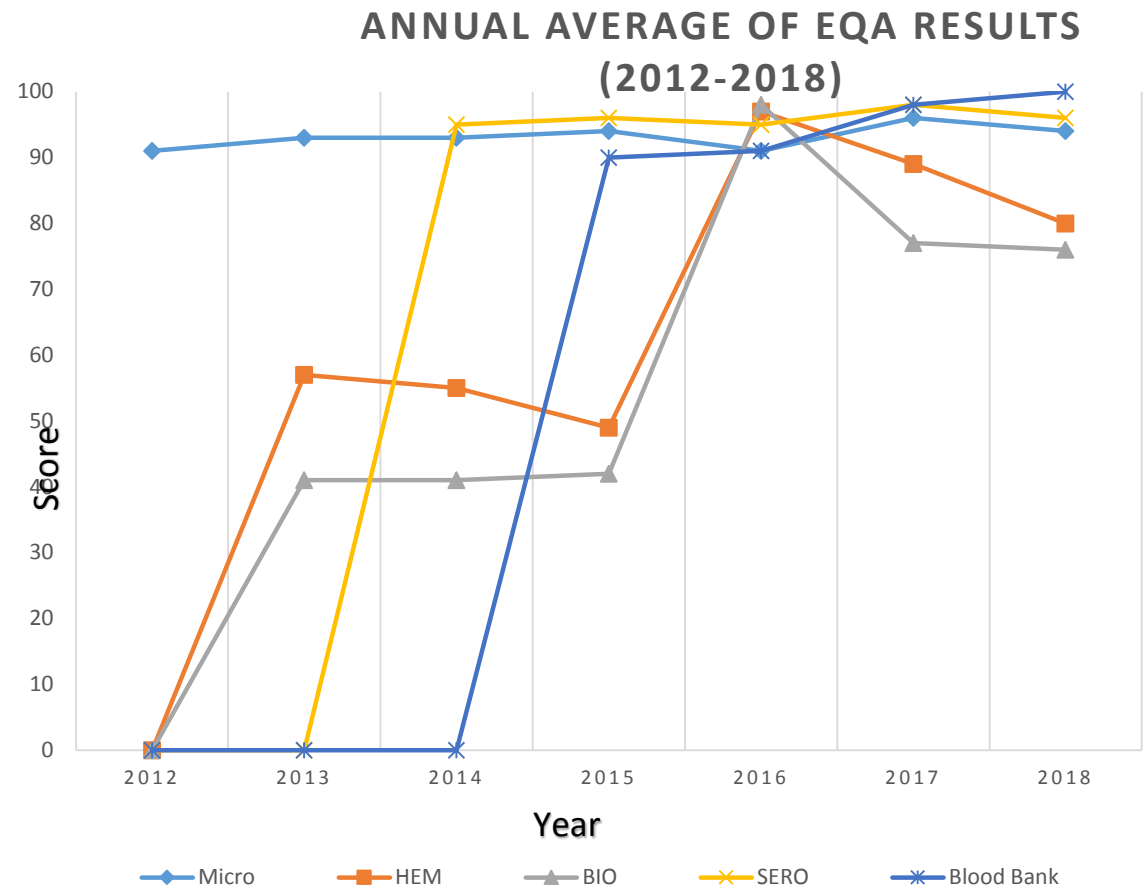


- Define quality control and describe its relationship to the overall quality management system.
- Describe differences in quantitative, qualitative, and semi-quantitative examinations

Data analysis for (PT/EQA)

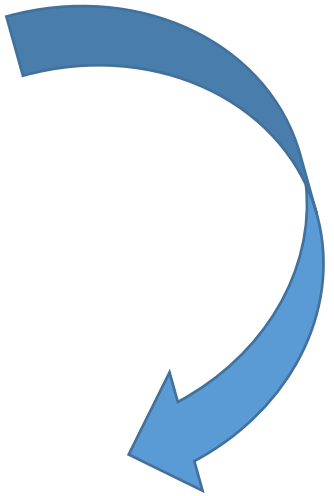
Average score of PT Microbiology, Serology & Blood Bank of all Labs from 2012-2017 and 2018





What's the Challenge / Issues (PT/EQA)

- Which analysis to challenges
- Challenges per send out per quarter and year
- What range to consider
- What complexities to incorporate



What's Proficiency Testing:
That's Panels of specimens are sent to multiple test sites by reference labs test sites perform test and report include indicate quality of personnel performance.

What's on site evaluation:
That's assessment of lab practice focus on how the labs monitors its operation and ensure testing quality provides information for internal process improvement on sites evaluation.

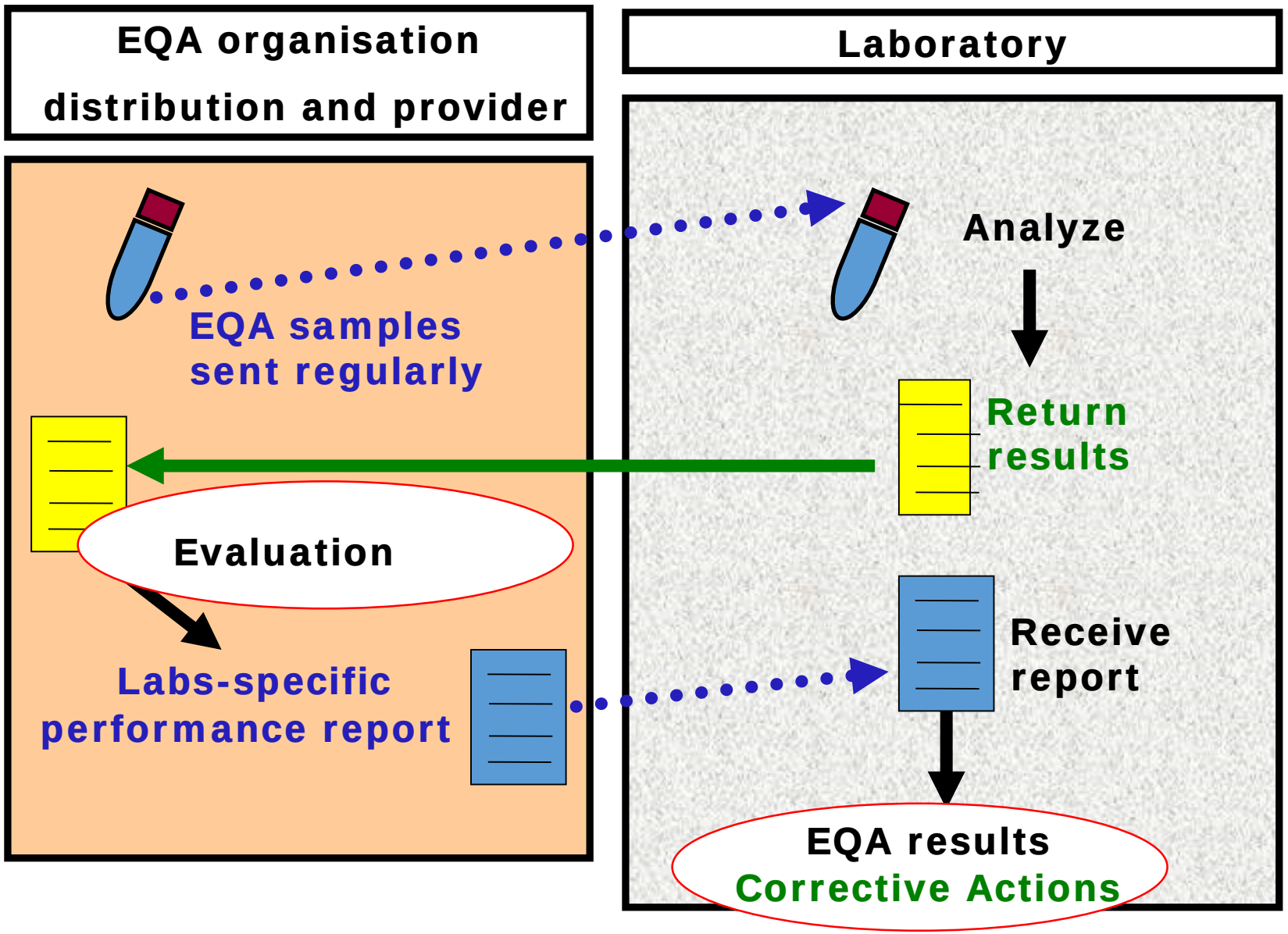
EQA Assessment:
That's corrective action and action taken to correct a problem or Deficiency through QC competency of staff report.

To ensure the public received accurate and useful information

The EQA is a process for provide

- Quality information and Education
- Report for confidentially and good communication
- Research and social responsibility

EQA Process



The laboratories participating in the program analyze the samples and return their results to the central organization.

Results are evaluated and analyzed, and the laboratories are provided with information about their performance and how they compared with other participants.

The participating laboratories use the information regarding their performance to make appropriate changes and improvements.

Planned Activities for 2019

- Ensure the staff are adequate trained
- Follow consensus guideline users by scientific panels
- Ensure proper transcription of data throughout the testing process
- Strengthen the National Strategy for Medical Laboratory Services, translate and ensure a global strategy and a national health laboratory policy with the format and scope suitable to the country context, with proper coordination of all relevant stakeholders for IHR requirement Implement the National specimen packaging and transportation guidelines
- Strengthen and build up technical lab staff at National Reference towards developing in-house EQA for the serology and microbiology and Improve facilities to ensure physical containment of dangerous pathogens and storage of pathogens
- Strengthen and coordinate laboratory network to support laboratory activities

Thank you!

Everyone

Everywhere and every time