***QUESTION BANK***

***TEXT***

Pre & Post Assessments

**PRE & POST ASSESSMENTS**

The following is an example of a pre & post assessment covering all eight of the programmatic modules. If the facilitator is not providing training on all the modules, the example can be customized to include more questions from the modules that form part of the training. Ideally the pre & post assessments should consist of 10 - 20 questions. A list of questions (and answers) for all the programmatic modules is provided at the end of this document.

EXAMPLE

|  |  |
| --- | --- |
| **Question** | **Score** |
| 1. What is the basis for your specimen referral network design? | 1 |
| 1. Countries should adopt all WHO-recommended diagnostics in their national algorithm. True or False? | 1 |
| 1. What are the key objectives for diagnostic services related to the END TB Strategy? | 3 |
| 1. Give three reasons why quality diagnostic results are important? | 3 |
| 1. Name two technologies that are NOT recommended by WHO for diagnosis of active TB? | 2 |
| 1. What are advantages of electronic data over paper-based data? | 2 |
| 1. What is the vision of the END TB Strategy? | 1 |
| 1. List three activities for developing a QA programme? | 3 |
| 1. Name two cost elements that should be included when developing a budget for TB laboratory services? | 2 |
| 1. Give two benefits of integrating forecasting and procurement for multi-disease testing devices? | 2 |
| **TOTAL** | **20** |

**PRE & POST ASSESSMENTS QUESTIONS**

Question selection for developing a pre & post assessment tool:

MODULE 1

1. What is the END TB target for reduction in the number of TB deaths by 2020?
2. Reduction in the number of TB deaths is 35% compared with 2015 (%). (Slide 8)
3. What are the key objectives for diagnostic services related to the END TB Strategy?
4. Increase access to rapid and accurate detection of TB
5. Reach universal access to DST
6. Strengthen quality of laboratory services (Slide 13)
7. Countries should adopt all WHO-recommended diagnostics in their national algorithm. True or False?
8. False – WHO-Recommended TB diagnostics should be adopted by countries according to local context, epidemiology and resources
9. Name two technologies that are NOT recommended by WHO for diagnosis of active TB?
10. Interferon-Gamma Release Assays (IGRAs)
11. Commercial serodiagnostic tests
12. Describe specific process to be considered when adopting new diagnostics at country level.
13. Situational analysis, TWG, review of WHO policies, TWG to provide recommendations, determine need for country evaluation

MODULE 2

1. **The key considerations when implementing a new TB diagnostic test are:**
   1. National policy review and revision
   2. Diagnostic network
   3. Infrastructure
   4. Personnel
   5. Treatment capacity
   6. Quality assurance
   7. Procurement
   8. Monitoring implementation
   9. Connectivity
   10. Financing
   11. Collaboration and coordination
2. **Mapping the diagnostic network important because you are able to:**
   1. Determine optimal placement of TB diagnostics to improve access and impact
   2. Determine the best national testing algorithm for your country
   3. Understand your current referral network
   4. Design a functional referral network
   5. Crucial for logistics planning and optimization to gain cost efficiencies
   6. Scenario-planning to understand costs/inputs without spending the associated time/money
   7. Plan for integration of different vertical disease programs
3. **The roles of the TWG when implementing a new TB diagnostic test are:**
   1. TWG can provide recommendations on potential role of new tests and placement within network, as well as possible algorithms
   2. TWG is able to determine need for country evaluation data prior to uptake of new technologies
4. **Three types of indicators that should be monitored when implementing a new TB diagnostic test (with an example) are:**
   1. Process indicators: how many health facilities had access to Xpert MTB/RIF testing services this year?
   2. Outcome indicators: how many patients diagnosed with Xpert MTB/RIF were initiated on treatment during this quarter?
   3. Impact indicator: Did implementation of Xpert MTB/RIF result in a reduction in TB-associated mortality in HIV co-infected individuals?

MODULE 3

1. **Give two reasons why specimen referral networks are important – answer any of the two below:**
2. Linkages between patients, clinicians and laboratories
3. Should be supportive, not a bottleneck
4. Can increase access to diagnostics
5. Referring a specimen, instead of a patient, takes the burden off the patient to reach the laboratory 🡪 possibly leading to equity in coverage
6. Try to ensure funds put toward HR, reagents, equipment, infrastructure are not wasted
7. A national system can be more cost effective than placing staff and under-utilised equipment at lower levels
8. **What are two weaknesses in specimen transport systems – answer any of the two below:**
9. Lack of understanding and comprehensive view of specimen referral networks in a country
10. Weak coordination/supervision
11. Lack of tools to properly design an efficient network
12. Fragmented design and implementation, i.e. TB-only
13. Lack of understanding of true costs of the system
14. Weak monitoring and evaluation, including quality control
15. Not enough focus on biosafety/biosecurity
16. **What is fragmentation when referring to specimen referral networks?**
17. Multiple referral mechanisms depending on the tier, region, funding available, transport options
18. **What does IST TWG stand for and what are the benefits of creating one?**
19. Integrated Sample Transport Technical Working Group – it can help provide supervision and coordination to fragmented networks
20. **What is the basis for your specimen referral network design?**
21. Your national testing algorithm
22. **What documents are crucial for the design phase?**
23. National testing algorithm, national guidelines/policies, SOPs and job aids
24. **What are other uses of the specimen transport network – answer any of the below:**
25. EPTB specimens, surveys
26. Specimens for HIV monitoring, surveillance systems, outbreak response, etc.
27. Reverse logistics: transport of PT samples and other supplies/data
28. **What is one key performance indicator for your specimen transport network – answer one of the below:**
29. Access to diagnostics measured by testing volumes in the laboratory
30. Turnaround time from specimen collection to return of results
31. laboratory
32. Efficiency of the system, measured by a unit cost such as cost per specimen transported or result issued

MODULE 4

1. **Give three reasons why quality diagnostic results are important?**
2. So that good quality results may be obtained which are accurate, appropriate and are not delayed
3. To avoid dire significant consequences such as:
   * 1. Unnecessary treatment
     2. Treatment complications
     3. Failure to provide the proper treatment
     4. Delay in correct diagnosis
     5. Unnecessary diagnostic testing
4. So that there is no increased cost in time and personnel effort and adverse patient outcomes
5. **List six activities for developing a QA programme?**
   1. Standardize policies & documentation
   2. Maintain & service equipment
   3. Conduct training
   4. Coordinate on-site supervisory visits
   5. Implement PT
   6. Strengthen the supply chain
6. **List five activities that should be conducted when implementing the following at the central level:**
   1. Equipment maintenance & servicing (any one of the following):
      1. Develop a list of all equipment at the testing sites
      2. Develop a maintenance schedule for equipment
      3. Select authorized providers to service equipment based on defined criteria
      4. Estimate budget needs and timing
      5. Identify who from the testing site is responsible for communicating with authorized providers and the central level
      6. Establish communication procedures in case of equipment failure
      7. Monitor testing sites to ensure maintenance & servicing is performed as per schedule
7. Training (any one of the following):
   * 1. Select appropriate staff to attend trainings
     2. Only use trainers who have been certified as competent
     3. Keep a register of certified users, advanced users and trainers
     4. Define and document the criteria for competency. Only training participants who meet the criteria should be certified as competent
     5. Perform competency assessments after training, and periodically (*e.g.* annually) thereafter
     6. Retrain staff periodically according to pre-defined intervals
8. Supply chain management:
   * 1. Forecast reagent needs based on testing site consumption data
     2. Ensure sufficient budget for procuring reagents
     3. Select suppliers based on defined criteria
     4. Ensure integrity of reagents during distribution to testing sites
     5. Ensure quality of supplies received prior to distribution to testing sites (*e.g*. new lot testing)

MODULE 5

1. What are the three components of a diagnostic connectivity solution?

1. A connectable diagnostic device that produces electronic data
2. A software platform that receives and interprets data
3. A means to transmit data from the device to the software platform and to a server

2. What are advantages of electronic data over paper-based data?

1. Electronic data is less time consuming and less prone to transcription errors
2. Newer diagnostics produce results data in digital format (also known as electronic data)
3. Electronic data can be rapidly and accurately sent simultaneously to different recipients according to their needs, and can be easily analyzed

3. How can diagnostic connectivity solutions benefit TB programmes?

1. Remote monitoring and quality assurance
2. Sending results automatically to clinicians
3. Sending results automatically to laboratory information management systems or electronic registers
4. Inventory management
5. Surveillance
6. Data Access

4. What should be included in a Data Use agreement with a software provider?

1. Ownership of all data by the MOH
2. MOH power to share access with selected parties
3. Planned storage and security of data, and any planned use of the data by the software provider
4. Assurance that patient data remains confidential and not disclosed to unauthorized users or used by the software provider outside of the terms of the agreement
5. Other requirements that are specified in national policies

5. What are budgeting requirements during the preparation, set-up/installation and operational phases of a connectivity system?

1. Preparation phase: Landscape assessment
2. Set-up/installation phase: Hardware and equipment; configuration and customization of connectivity solution; implementation workshops/trainings; installation and roll-out of connectivity solution; diagnostics connectivity solutions provider
3. Operational phase: running costs for connectivity; remote of in-country technical support; in-country human resources

MODULE 6

1. **What is the vision of the END TB Strategy?**
2. A world free of tuberculosis– zero deaths, disease and suffering due to tuberculosis
3. **Give two examples of top-ten priority indicators of the END TB Strategy?**
4. TB treatment coverage
5. TB treatment success rate
6. Percentage of TB-affected households that experience catastrophic costs due to TB
7. Percentage of new and relapse TB patients tested using a WHO recommended rapid tests (WRD) at the time of diagnosis
8. LTBI treatment coverage
9. Contact investigation coverage
10. Drug susceptibility testing (DST) coverage for TB patients
11. Treatment coverage, new TB drugs
12. Documentation of HIV status among TB patients
13. Case Fatality Ratio (CFR)
14. **Give two examples of the laboratory indicators of the END TB Strategy?**
15. Does national diagnostic algorithm indicate a WHO-recommended rapid diagnostic (WRD) as the initial diagnostic test for all people with signs and symptoms of TB
16. Percentage of notified new and relapse TB cases tested with a WRD as the initial diagnostic test
17. Percentage of notified new and relapse TB cases with bacteriological confirmation
18. Percentage of testing sites using a WRD at which a data connectivity system has been established that transmits results electronically to clinicians and to an information management system
19. Does national policy indicate that TB diagnostic and follow-up tests provided through the national TB programme are free-of-charge, and/or that fees can be fully reimbursed through health insurance, for all people with signs and symptoms of TB
20. Does national policy and diagnostic algorithm indicate universal access to DST
21. Laboratory indicators
22. Percentage of notified bacteriologically confirmed TB cases with DST results for rifampicin
23. Percentage of notified rifampicin-resistant TB cases with DST results for fluoroquinolones and second-line injectable agents
24. Percentage of diagnostic testing sites that monitor performance indicators and are enrolled in an external quality assessment (EQA) system for all diagnostic methods performed
25. Percentage of DST sites that have demonstrated proficiency by EQA panel testing for all DST methods performed
26. Percentage of laboratories conducting culture, LPA and/or phenotypic DST, in which a formal quality management system towards achieving accreditation according to international standards is being implemented
27. Is NRL currently accredited according to the ISO15189 standard
28. **List the three steps in developing a M&E framework for your country?**
29. In a matrix, list all performance indicator frameworks under their respective sources (e.g. NTP, NTRL, END TB etc.)
30. Review or update existing frameworks and align
31. Rationalize the list of indicators and remove duplicates or unwanted indicators
32. **List five sources of data that may be considered when developing a M&E framework for your country?**
33. Request for examination of biological specimen
34. Basic management unit TB register
35. Second-line TB treatment register
36. Laboratory register for smear microscopy and Xpert MTB/RIF
37. Laboratory register for culture, Xpert MTB/RIF and drug susceptibility testing (DST)
38. Quarterly report on TB case registration in the basic management unit
39. Quarterly report on TB treatment outcomes in the basic management unit
40. Combined annual outcomes report for basic TB and for RR-/MDR-TB

MODULE 7

1. **Name five cost elements that should be included when developing a budget for TB laboratory services?**
2. Training
3. Equipment
4. Supplies
5. Maintenance
6. On-site supervision
7. External Quality Assurance (proficiency testing)
8. Connectivity
9. Personnel and operational cost
10. **What steps can you take to ensure adequate budgeting is done for TB diagnostic services?**
    1. Allocation of TB laboratory services into budget
    2. Involve, align and coordinate different sources of funding/ donors
    3. Timeline of funding
    4. Opportunities for synergy
11. **What is the first step required for Global Fund new funding mechanism?**
    1. National TB Laboratory Strategic Plan (or well-articulated laboratory component of TB NSP) should be developed and aligned with NSP and National Laboratory Policy. (Slide 11)
12. **Which categories of service providers are able to access preferential pricing for TB diagnostics?**
    1. Private organisations
       1. Eligibility will be decided on a case-by case basis in consultation with local and global stakeholders (Slide 22)
    2. Public sector
       1. Governments or government funded institutions
       2. NGOs and UN-related agencies
       3. Not-for-profit organisations
       4. Global health funding mechanisms
       5. Agencies outside the country supporting local implementation (Slide 23)

MODULE 8

1. **What is an integrated diagnostic approach?**

An integrated diagnostic approach is the use of a single platform for testing for different clinical conditions using disease-specific tests

1. **Give one example of an integrated diagnostic approach?**
2. The GeneXpert instrument can be used to detect TB and determine rifampicin resistance (Xpert MTB/RIF assay), as well as for early infant diagnosis of HIV, or to quantitatively measure HIV and hepatitis C viral load
3. Microscopy is used to detect the presence of acid-fast bacilli in a sputum smear to diagnose TB and to detect parasites in a blood film to diagnose malaria
4. **List three considerations for selecting and placing multi-disease testing devices?**

Any three of the following:

1. The infrastructure needs (space, electricity, temperature, etc.)
2. Specimen referral systems
3. Availability of patient access to treatment for each disease being tested
4. Equipment, cartridge or reagent disposal requirements
5. Biosafety requirements for handling of specimens for all planned test types
6. Maintenance requirements
7. Human resources requirements needed to ensure supplemental equipment and infrastructure are in place
8. **List five key competencies for users of multi-disease testing devices?**

Any five of the following:

1. Preparation of specimens
2. Handling of specimens (including biosafety precautions)
3. Patient management and test counselling (e.g. HIV viral load)
4. Conducting testing
5. Following the national testing algorithm
6. Interpretation and reporting of results
7. Servicing & maintenance of the instrument
8. Waste disposal specific to each assay’s reagents and cartridges
9. **Give two benefits of integrating forecasting and procurement for multi-disease testing devices?**

Any two of the following:

1. Cost savings from increased volumes and price negotiation with manufacturers
2. Savings on shipping, storage and transport of reagents
3. Integrated systems to monitor stocks and expiry dates of reagents
4. Ability to track consumption and wastage