Xpert MTB/RIF use for TB diagnosis in TB suspects with no significant risk of drug resistance or HIV infection

DOTS expansion and enhancement
Objective

- This group deals with the majority of TB suspects and patients.
- Most patients needing immediate and more specialized/ additional care are excluded into HIV and DR-TB algorithms.
- Primary objective is for early and increased case detection.
  - Smear negatives are difficult to diagnose and current algorithm not being practiced.
- Global level broad guidance but decisions at country level.
  - Promote countries to develop models.
Consensus…1

• Introduction of Xpert should include district level, or sub-district level facilities, preferably, but not limited to, facilities with quality CXR / (public + private?)
  – Discussion points for the agreement:
    • Epidemiological situation / individual patient risk factors / level of health system
    • Public health goals versus individual patient levels
    • PAL and health system links
    • NTPs and Partners will buy machines – guidance required on where and how to use them given the cost of cartridges
Consensus...2

• For all health facilities develop country level models and test them (public and private)
  – Local context of flow patterns for patient, specimen and result
  – Balance between decentralization, local needs, hardware feasibility
  – Prioritization list is a country level decision
    • Pediatric, private sector, etc.
  – Risk groups in a priority order
    • CXR abnormal, SS- suspects, seriously ill patients
    • Decide which SS- require Xpert
**TB diagnosis can not be totally ruled out, particularly for the TB suspects who have normal CXR and did not undergo any bacteriological examination. For this specific category of patients, a sputum smear examination may be needed.
People with suspected TB

1. HIV status
2. DR-TB risk

Risk of DR-TB (e.g. TB Rx history >1m, DR-TB suspect) irrespective of HIV status

Facility with Xpert as well as quality CXR (result) available and accessible

CXR

CXR Normal

CXR abnormal

XPERT MTB/RIF

Further Clinical Management**

TB+ No Rif Res

FLD

SLD

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Follow TB/HIV algorithm

1. HIV+
2. Unknown HIV in high HIV setting

People with suspected TB

1. HIV status
2. DR-TB risk

Risk of DR-TB (e.g. TB Rx history >1m, DR-TB suspect) irrespective of HIV status

1. HIV- or unknown HIV status in low HIV setting
2. Not significant risk for DR-TB
3. Not seriously ill

Microscopy center, Xpert on referral level

Microscopy

SS-

SS+

Prioritize high risk groups (symptoms and risk factors)

Send sputum or patient

XPERT MTB/RIF

No TB

TB+ No Rif Res

TB+ Rif Res

FLD

SLD

Further Clinical Management**

**TB diagnosis can not be totally ruled out, particularly for the TB suspects who have normal CXR and did not undergo any bacteriological examination. For this specific category of patients, a sputum smear examination may be needed.
• Algorithm is for adults
• Seriously ill patients in the algorithm are small proportion
  – Quick and appropriate clinical management, including referral for hospitalization
Opportunities

- For reemphasising policy
  - On front loaded microscopy
  - HIV testing for TB suspects
  - PAL
- Health system
  - Investing on CXR
  - Use of Xpert for other diseases (health system strengthening)
  - Human resource benefit from Xpert
- CXR
  - QA
  - New technology in Xray
  - Evidence on algorithm as a whole
- Strengthening specimen referral system
- Electronic notification, data storage, inventory
Unresolved issues

• Diagnostic algorithm for pediatric TB
• Case definitions and treatment outcome definitions
• Treatment monitoring tool
• Scaling up availability of quality Xray – Health system issue
• Xpert in low burden setting / active case finding
• Regulatory issues related to Xpert
Thanks