Integrated TB and HIV Public health laboratory Network

TB/HIV Program
Dr. S. Marealle
Epidemiological situation of TB

- 13140 cases of all forms of TB reported (2010)
  Incidence rate 635 per 100,000 population
- 76.9% of those tested were HIV positive (2010)
- 96% of HIV+TB patients on CPT 2010
- 26.9% of HIV+TB patients on ART (2010)
- Case Detection rate 81% 2010 (SS+ ve)
- Treatment Success, 70% 2010
- Death rate 10.8%, 4.8% defaulter rate
- Not evaluated 10.3%, 1.8% Transfer Out
- 562 ever enrolled MDR cases by February 2011 (199 active on treatment)
- TSR for 2008 cohort MDR-TB patient is 64.6%
EQA NETWORK OF TB Microscopy LABS, Lesotho

National Reference Lab (NRL)
(Central TB Lab, Q.E.II Hospital, Maseru)

Intermediate Reference Labs (IRLs)-3
(Maseru*, Leribe & Mafeteng)

District Hospital Labs/ Peripheral labs (MCs)

LERIBE
Leribe
‘Mamohau
Butha Buthe
Seboche
Mokhotlong

MASERU*
Maseru lab
Scott’s
St. Joseph’s
Berea
Maluti Adventists
St.James
Paray

MAFETENG
Mohale’s Hoek
Quthing
Machabeng
Tebellong
Mafeteng

• Central TB lab at Maseru has functional dichotomy at all three levels
Laboratory Network

• There are a total of 17 laboratories throughout the country including one TB Reference lab capable of doing TB culture and DST as well as LPA technology for INH and Rifampicin resistance.

• Gene Xpert is also planned.
Laboratory services

• At central level
  – Central reference Lab (CRL) with capability to run TB cultures in MGIT automatic systems as well DST tests with short Turn Around Time
  – molecular testing capacity

• Districts
  – Districts have capacity to perform smear microscopy only and they refer to central for culture and DST

• Enrolled in the EQA with SNRL-MRC &NHLS
TB Molecular Diagnostics laboratory
• Partnership between Govt. of Lesotho, FIND, PIH and WHO, to refurbish Central TB reference Laboratory in 2007 as emergency plan to address MDR-TB

• FIND guided the refurbishment and renovation of a smear microscopy lab into a state of the art BSL 2 to make it compliant with WHO minimum requirements for performing TB solid and liquid culture systems and DST
FIND cont.

- MGIT 960 system and supplies for three years were provided by FIND
- On-site technical assistance - an expatriate consultant
- Integrated TB/HIV molecular diagnostic facility established November 2008 and Launched
MGIT and Immuno-Assay
WHO - STOP TB initiate - EXPAND-TB

• MOU between MOH Lesotho & WHO/GDF
  – laboratory supplies for liquid culture, DST and molecular rapid MDR-TB testing free of cost
• 5 years grant from May 2009
• Facilitated through FIND
Lab Achievements

- Smear Microscopy SOP’s in place – all labs
- Culture and DST manual
- EQA Guidelines – all labs
- Supervision conducted
- Training of Lab personnel
- Introduction of microscopists
Lab Achievements

• HIV rapid testing and TB smear available at primary health care level
  – HIV rapid testing on the spot
  – TB diagnosis through sample referral (Riders for Health)
Number of HIV-associated TB cases notified from 2009 to 2010

![Graph showing the number of TB patients offered TB services from 2009 to 2010.](image)
Tuberculosis ref.lab pre-renovation
Line Probe Assay
Rapid Molecular Test for MDR-TB
Challenges

• Working space in the current laboratory
• HR esp. data clerk to assist data entry of results
• DST and culture centralized at 1 lab with limited capacity (some patients suspected with MDR-TB can not be timely diagnosed)
• Sustain motivation of HCW at district level due to long turnaround time
• High prevalence of HIV in the general population and among TB patients.
• Emergence of drug resistance TB.
Supervision–
NTP manager in the Lab along with Head of Lab
Way forward

• Regional laboratories operational with decentralized DST and culture to 2 more regional labs
• Further decentralization of microscopy to 13 additional Health centers (high case load and difficult to reach)
• Roll-out of Gene-Xpert (at central and regional level)