

**International Consultative Workshop – Swaziland
October 28 - 30, 2009**

**An emergency public health response to the combined
DR-TB and HIV-AIDS crisis in the South African region**

Recommendations

The following recommendations were made by the members of each discussion group and compiled under the leadership of each group's chair.

Session 1: Health System Recommendations

Problems Identified

- High prevalence of TB & HIV
- Barriers to accessing services: distance, poverty, long term or life long treatment
- Critical human resource problems
- Drug and supplies
- Limited space in the facilities

Care Model Decentralization and Task Shifting

- **Initiation and follow up of patients for first line TB treatment, first initiation on ART, and PMTCT should be done at peripheral health facility by the qualified nurse working at the facility.**
- The existing health care staff can not address the needs of the population. This applies to both management and clinic staff.
- For this reason task shifting needs to happen,
- There is a need to decentralize TB & ART services together.
- Need for ART coordinator at the regional level. (TB-HIV co-infection)

Task Shifting

- What task should be shifted to whom?
 - HCT, and counseling to trained lay people (EC and other individuals)
 - ART initiation from medical doctors to nurses
 - First line TB treatment initiation by nurse (Smear + positive and diagnosed Smear negative)
 - TB microscopy by trained lay microscopist
 - Drug dispensing by trained lay dispenser

Conditions for Task Shifting to Nurses:

As a short term solution

- Need piloting of task shifting to nurses,
- Training,
- Make Guidelines, and tools available
- Provide effective support and supervision
- **Filling currently vacant posts as much as possible**

Long term solutions

- discussion with Nursing council & other regulatory bodies, advocating for policy change or formulation
- Creation of new positions by estimating the need in the coming years
- Engagement with training colleges: revival of the program of family nurse practitioner,
- MOH needs to work with Ministry of Education: Integration of TB, ART, PMTCT in pre services curriculum.
- Proper remunerations of applied extra qualification
- Retention of existing health workers
- Improvements in infra structure, water and sanitation

Condition for Task Shifting to Lay People

- It should be to people from the respective community (where facilities are situated)
- Appropriate remuneration
- Provision of training
- Provision of supervision

Task Shifting

- Though some task shifting is already happening in the country, there is a need to pilot projects, in a model appropriate for the local context: Examples
 - Microscopist at clinics
 - Nurse initiated ART at HCs and clinics
 - Nurse initiated TB treatment at the clinic,
 - Dispensers at clinics
- Learn from regional good practices, current and past experiences

Community Based Lay Providers

- Involving community in the recruitment of lay providers for the clinics
- Strengthen the linkage between the facility based lay service providers and community based providers
- The existing community workers:
 - Rural Health Motivators
 - Home based care providers
- Community based MDR TB care: MSF, Regional Health Office & National MoH to work on.

Cross Border Migrants

- Existing system for drug sensitive TB patients but needs strengthening
- No System currently in place for MDR TB patients
- The TB program managers to work together on this in the near future
- Weak system for ART referral in the SADC region
- Need to strengthen referral system (SADC Ministers meeting)

Session 2: Clinical Management of DR-TB Recommendations

When to do DST?

- Consensus with some high risk groups (failures, contacts esp. pediatric, all retreatment cases)- agree with WHO guidelines
- Decision of exactly which groups to test should be based on resources, DR-TB and HIV prevalence
 - If capacity exists then should do DST at diagnosis in HIV positive
 - Recommend that resources should be scaled up to meet this
- Recommend that DST should be done in all patients hospitalized for TB (add to WHO protocols).
- Recommend that genetic testing needs to be introduced.
- Culture still plays an important role
- Given current resources review need for culture monitoring every month

Regimens

- Recommend that countries in the region using PAS in 5 + drug regimen need to:
 - look at 2nd line resistance data to review if needed
 - Review whether to remove PAS or Eto (considerations of resistance levels, logistics of community management with cold chain)
- Use of ethambutol in DR TB regimens should not be considered as likely effective regardless of sensitivity result (i.e. OK to use but don't trust)

Empiric MDR TB Treatment

- Empiric MDR TB treatment is recommended for young children contacts of MDR TB cases
- Discussion around caution with empiric treatment in adults:
 - tension between early deaths in HIV/MDR TB co-infected and potential for overtreatment with expensive and limited drugs
 - Rapid diagnosis will help avoid empiric regimens

Regimens (continued)

- All MDR TB patients regardless of CD4 should get ART

- Preferred ART regimens: WHO guidelines adequate with current evidence
- Recommend that 2010 WHO guidelines should review evidence for 5 versus 7 days per week Injectable Agent. Currently both are acceptable
- Open question – terizidone versus cycloserine - Recommendation that institutions with data should publish

Side-effects

- Recommend that programmes should have a clinical expert committee for difficult case decisions
- Hearing Loss:
 - Recommend for improved monitoring using audiometry and better HCW education and regular patient questioning, given severe disability and difficulty diagnosing early clinically
 - Once clinically present should stop aminoglycoside (in general unless lack of sufficient drugs for treatment)
- Haemoglobin and AZT
 - Recommend regular monitoring of hemoglobin with patients on AZT and MDR TB treatment
- Nausea and Vomiting
 - Aggressive management of nausea is important
 - For severe nausea and vomiting more effective anti-nauseants (e.g. ondansetron) should be available and we recommend efforts to reduce the pricing of these
- Recommend regular monitoring of Potassium – life threatening side effect of injectables
- If don't have facilities to test magnesium then recommend empirically treating with magnesium if hypokalemic (dose cations separated from quinolones)

Treatment Support (community, clinic, hospital, nutrition, social, economic)

- Not covered in this session due to time, however the social environment and to patient support play as important a role as regimen choice

Session 3: Infection Control Recommendations

General recommendations

- High incidence and unfavourable outcomes in TB which needs an emergency response
- Infection Control underpins the entire TB control program and should be a priority
- IC training should be ensured to all HCWs
- The community should be an integral part of the IC program
- More international resources are required to cope with the epidemic

Administrative Controls

- All incidence of TB in Health Care Workers should be reported to the National TB Program and ensure that staff are aware of occupational health compensation policy;
- Reduce turnaround time for smear testing to ideally <48 hours. Prescription to be done on the same day as smear+ result received:
 - Improve communications lines between the laboratory and the clinics (mobile phones / Email / Fax);
 - Improve communication between the clinics and the patients (community health workers with mobile phones).
 - Implement contact/default tracing
- Improve triage in out-patient facilities through identification of 'coughing patients'.
 - In Clinics: Appoint cough officer (can be a lay person)
 - In Health Centers: sensitize all staff to identify coughing patients;

Environmental Controls

- Involve the Ministry of Public Works and an Infection Control specialist when constructing and rehabilitating health facilities;
- Opt for natural as opposed to mechanical ventilation:
 - High cost of implementing and maintaining mechanical ventilation (funds could be more productively spent elsewhere);
 - Unreliable electricity supply;
- Improve physical layout of all in-patient wards:
 - 3.5 meters between the center of each bed;
 - Hang cubicle curtains;
 - Place beds under open windows;
- Improve natural ventilation in out-patient facilities:
 - Open the windows;
 - Remove curtains, blinds & mosquito nets and paint windows;
 - Create outdoor waiting areas;
 - Build sputum collection booths outside;
 - Install wind turbines (Whirlybirds: No electricity or maintenance);

Personal Respiratory Protection

- Providing surgical masks to all patients should be considered, BUT only after all other administrative and environmental controls are in place and supply is sustainable;
- N95 Respirators should be used by Health Care Workers during high risk procedures only (e.g. sputum induction & bronchoscopy), on condition of the following:
 - A regular fit test program;

- Availability of the correct size and model and quantity of N95 respirators (max time of use = 1 week);

Household Infection Control

- Educate patients and their families about how TB is transmitted and cough hygiene;
- Encourage TB patients to sleep alone and receive visitors outside;
- Improve natural ventilation (open the windows);

Session 4: Health Information Systems Recommendations

Issues discussed

1. Individual follow-up of HIV-TB patients, epidemiological monitoring, and programme performance monitoring. What are existing standards in a decentralized setting (manual data recording vs. computer based system)?
2. What are current strengths and weaknesses of HIS in Swaziland and other countries in the region?
3. How to improve integration between: HIV clinical data, TB clinical data, laboratory data, and drug supply systems?
4. Data protection (legal & technical aspects)

Question 1

Individual follow-up of HIV-TB patients, epidemiological monitoring, and programme performance monitoring. What are existing standards in a decentralized setting (manual data recording vs. computer based system)?

Main discussion points

- Availability of guidelines, SOP: dissemination, consultation of end users
- Need to keep objectives of system clear (case management or surveillance or both ?)
- Format of reporting: paper, electronic or a mix

Recommendations

- Standardize the paper-based system for registration of patient information at point of care (peripheral)
- Establish standard electronic registration at higher administrative levels
- The aim is to harmonize as much as possible. Recording and reporting functions can be done at different administrative levels if necessary

Question 2

Current strengths and weaknesses of HIS in Swaziland and other countries in the region?

Main discussion points

- No unique identifier for patients
- Availability and turnover of human resources, training
- Infrastructural constraints (electricity, internet, hardware ..)
- Insufficient feedback to different stakeholders in health system
- Provisions for tracing defaulters

Recommendations

- Work with other Govt entities to develop a unique identifier for clients of health services
- Assign and train data providers and users of system
- Find practical ways to overcome problems (eg, SmartCard, renewable energy sources, use of low consumption PCs, cell phones to call defaulters, data back-up systems)

Question 3

How to improve integration between: HIV clinical data, TB clinical data, laboratory data, and drug supply systems?

Main discussion points

- Existing APMR, ETR, Rx solution
- Interaction with laboratory data
- Eclectic procedures regarding data collection for TB, HIV, DR-TB ...

Recommendations

- Build on existing electronic systems to ensure all data needs are satisfied and ensure necessary access to users and providers of data (incl. laboratory)
- Set up a national platform where TB and HIV programs would work on the integration of program data (including DRTB)
- agree on common guidelines and program indicators - involving representatives of end users

Question 4

Data protection (legal & technical aspects)

Main discussion points

- Legal framework for access and use of data
- Measures to secure data, esp. passwords, user accounts with different authorisations to view/modify/delete records

Recommendations

- Ensure that systems in place conform to existing norms for data protection and ethical use of information (differentiation between patient data and programme data)
- Sign memorandums of understanding with users to authorize use of data, based on “need to know” and intended use of information

Session 5: Laboratory Recommendations

Topics

- Network
- Outline of Laboratories
- Human resources
- Methods
- EQA and IQA
- Partnership

Recommendations

- The laboratory network need to be strengthened to determine the contribution and quality of microscopy centres
- In all smear microscopy labs safe work flow should be established, eg a safety hood.
- Transport system needs to be strengthened

Human Resources

- Assess the health professional needs in the country (partners).
- Strengthen human resources to meet additional laboratory activities
- Develop a training programme locally

Methods

- Ensure proper number of samples and of good quality
- Decentralize sputum collection to the clinic to avoid patient coming to HC
- Mobile resources so that DST is possible in every TB suspect if resistance is >5% in new patients!
- Implement faster culture and DST techniques than LJ
- Perform training before implementing any new diagnostic tools
- QCA needs to be strengthened (EQC and IQC) and both financial and human resources need to be ensured
- NRL need to get together all partners involved in the refurbishment of the new TB lab together
- Create laboratory working group with all partners involved in TB diagnosis and have regular meetings

Session 6: Ethics Recommendations

Summary

- A. Liberty-restricting measures

- B. Duty to care: responsibility of the State in HIV and TB diagnostic and care provision
- C. Support for treatment-related adverse events and disabilities (HIV and TB care)

A. Liberty-restricting measures

A.1. Forcible isolation

- Should be used as very last resort, after all other measures have been exhausted
- Legal framework should be in place
- Due process
- Proportionality to expected public health impact (epidemiological relevance)
- Proportionality to the State's commitment to disease control (quality assurance)
- Social safety nets: uninterrupted social grants, community support program

A.2. Special case of minors whose parents refuse treatment should be legally reviewed

A.3. Forcible treatment of competent adults is never justified

B. Duty to care: responsibility of the State in HIV and TB diagnostic and care provision

- The state and (provided that a MoU has been signed) non-governmental actors have a duty to provide ancillary care, based upon:
 - not creating perverse incentives
 - Redressing inequalities in access to care
 - Providing services as close to the population
 - Providing adequate information to the community
- Immediate, direct costs do not justify waiving these responsibilities. The incurring costs can be recovered by:
 - Long term indirect benefits
 - Income generating projects
- The State has an obligation to reduce financial and nonfinancial barriers to accessing care. It should remove user fees for health care and undertake efforts to minimize stigma.

C. Support for treatment-related adverse events and disabilities (HIV and TB care)

- In collaboration with professional organisations, the health system should establish proper monitoring of side-effects
- The State should define and provide a minimal package (to be specified) of measures to prevent and minimize adverse events and implement progressively the maximum standard of care possible.

- If adverse events occur, the State has an obligation to provide support, including disability allowances
- Decision for support should not be based on fault (i.e. difference between malpractice and “unavoidable side-effects”)

Session: 7 Drug Supply Recommendations

How can the system adapt to the increase in the number of patients requiring treatment taking into account the decentralization and integration of HIV and TB services?

1. Human resources

- Providing adequate and sufficient human resources, by having additional TB & ARV pharmacy technician based at each mother facility, the number of technician (s) will be based on needs of clinics in region:

Responsibilities of the additional pharmacy technician (s):

- Assist with the inventory of the clinic, provide training on dispensing & on stock management, ensure the proper communication within the clinics in the region (exchanging information), gathering orders, stock movement between facilities, and assisting the quantification at facility level, etc
 - **Additional pharmacy technician joins the 3 different pathways (ordering, transport and distribution)**
- Dispensing of drugs.
 - Discussion has occurred that there is a need of appropriately trained dispensers.

2. Quantification and forecasting

- Must be based on multiple methods and necessary information ex: morbidity data, consumption, projected needs including paediatrics, buffer stock, change in guidelines and policies, etc.
- Conduct a quarterly meeting with all the stakeholders to finalize quantification and forecasting including sharing information and challenges, getting a consensus on needs and identifying gaps (organized by TB program at national level. include relevant programs)

3. Procurement

- Strengthen annual procurement and financial plan which includes sensitisation of relevant ministries to ensure timely disbursement of funds and availability of drugs

4. Regional Warehouse

- regional warehouse will consolidate the three separate pathways of ordering and distribution within the region

- Involvement of regional health office for the transportation of drugs among health facilities
- monthly reporting to national level will be key

5. Storage space at peripheries

- Involvement of partners to organise/provide warehouse/storage (acceptable minimum standard) at the clinics