FREE STATE PROVINCIAL GOVERNMENT

Health

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TO ALL HEADS AND INSTITUTIONS OF THE DEPARTMENT OF HEALTH IN THE FREE STATE

PRIMARY HEALTH CARE CIRCULAR 7 OF 2000
COMMUNICABLE DISEASE CONTROL PROGRAM

MANAGEMENT OF MULTI DRUG RESISTANT (MDR) PATIENTS.

Attached please find the policy for implementation as indicated.
Please circulate the policy to all relevant role-players.

^HEAD OF HEALTH
PROF KC HOUSEHAM

Note:
*This document was signed by
Dr RD Chapman on the 4th December 2000

FREE STATE DEPARTMENT OF HEALTH

MANAGEMENT OF MULTIPLE DRUG RESISTANT TUBERCULOSIS (MDR)

1 POLICY

Ensuring effective diagnosis and management of all patients identified to suffer Multi drug resistant tuberculosis. (MDR).

2 INTRODUCTION

M.tuberculosis is the most common notifiable disease in South Africa and the leading infectious killer of young people and adults. Despite the best drugs against TB, 3-4% of patients develops Multiple Drug Resistant Tuberculosis (MDR-TB).

3 OBJECTIVES

- Ensure standard treatment guidelines.
- Ensure early and standard diagnosis of MDR patients

4 DIAGNOSIS OF MDR-TB

MDR-TB is defined as:

Resistance of Mycobacterium Tuberculosis to INH and Rifampicin irrespective of resistance to other drugs**.**

- *Primary* – resistance in cultures from new Tuberculosis patients with no history of previous TB treatment.
- *Acquired* – Resistance in cultures from patients who were treated for Tuberculosis before (retreatment).

5 MANAGEMENT OF PATIENTS WITH MULTIDRUG-RESISTANT TUBERCULOSIS

5.1 SPECIALISED REFERRAL FACILITIES AND SPECIALISED

MANAGEMENT TEAMS.

Moroka Hospital has been identified to admit and treat all MDR patients **but is currently been develop therefore patient will be admitted to Santoord Hospital till further notice.**

5.2 REFERRAL

- MDR patients can be referred directly to Prof D Pansegrouw at the Lung Unit, Universitas Hospital or Santoord (Moroka) Hospital.
- On referral, summarise previous treatment regimens and drug resistance results.
- Copies of all relevant results or patient information should accompany patient to referral facilities.
- Establishing the HIV status of MDR-TB patients is of clinical importance, especially with regard to increased adverse effects to TB drugs.

5.3 ADMISSION

- All patients to be admitted for MDR treatment admissions must be booked through:

Matron Sonja Plekker
Santoord Hospital
Telephone number: 051 - 8761041
Cell phone number: 082 779 4195

- Documents as mentioned in point 6.2 shoud accampony the patient.
- Uncomplicated patients to be referred for admission to MDR TB hospital.
- Patient too ill/sick to be transported must first be stabilised at a District Hospital; preferably in an isolation ward/unit.
- Complicated cases to be referred to Pelonomi Hospital Isolation Unit after consultation with specialist attached to the unit.

(Prof D Pansegrouw)
Lung unit
Universitas Hospital
Telephone 051 405 3536

- Patients with MDR-TB should be admitted until they have produced three consecutive monthly culture negative sputa.

5.4 TRANSPORT

- Patients referred from clinic to MDR TB Hospital should use existing commuter service.
- Transfer of MDR TB patients between hospitals remain the responsibility of the referring institution.
- MDR patients discharged will be transported back home by the discharging unit. (Santoord or Moroka Hospital)

5.5 MDR TB REGISTER

- The MDR unit (Santoord or Moroka Hospital) will keep a complete, up to date register of all MDR patients admitted. These patients will remain on this register until completion of treatment and should therefore **NOT** be entered on the clinic register.

5.6 SPECIALIST TEAM

The specialised management team will consist of :

- specialist respiratory physician attached to the isolation unit at Pelonomi Hospital. (Prof D Pansegrouw)
- dedicated MDR-trained nurse and an administrative assistant at each MDR TB unit.

These teams should oversee all aspects of MDR TB management and should be solely responsible for treatment and surgery decisions.

5.7 DISCHARGE

As soon as two negative sputum culture results are received, arrangements should be made for the provision of treatment at the nearest clinic where the patient resident.

5.8 DRUG SUPPLY

- Each patient will receive their outpatient treatment supply form the MDR unit.
- Medication must be taken under direct supervision at the clinic at all times.
- Patients must be **referred back to the MDR unit on a monthly** basis for a full evaluation and provision of medication.

5.9 TRAINING/PRACTICAL GUIDELINES

- The management of Multidrug Resistant Tuberculosis in South Africa, 2nd Edition June 1999. National TB Control Programme. Department of Health.

Training of all doctors and nurses who might be involved with the treatment of MDR TB patients should be ongoing and should be integrated with feedback sessions. These training sessions should be organised by the Provincial TB coordinator in close co-operation with the MDR management team.

5.10 LABORATORY ASPECTS

5.10.1 DRUG SENSITIVITY

- **Only** INH and Rifampicin and Ethambutol sensitivity testing to be requested.
- Remember a true MDR case is resistant to **INH and Rifampicin.**
- After four months of treatment, monthly sputum culture investigations
- should be done **until three consecutive monthly cultures** have become negative.
- Thereafter, sputum culture investigation should be performed every three months until the completion of therapy.
- All MDR patients should also tested for sensitivity against **ethambutol**. Patient found to be resistant to ethambutol will be put on to **cycloserine.**

5.11 HIV STATUS

Establishing the HIV status is of clinical importance, since HIV sero-positive patients may suffer increased effects from anti-tuberculosis drugs.

5.12 TREATMENT REGIMENS

5.12.1 Standard MDR treatment regimen

The Free State Province has elected to follow the **Standardised approach** in the treatment of MDR-TB patients.

- The standard treatment regimen for MDR-TB patients consists of a
  1 **four** month intensive phase with five drugs (kanamycin/amikacin, ethionamide, pyrazinamide, ofloxacin/ciprofloxacin, ethambutol),

(In cases where a patient is resistant to ethambutol he/she will be placed on cycloserine).

1 followed by a 12-18 month continuation phase with three drugs (ethionamide, ofloxacin, ethambutol) as indicated in Table 1.

- Drugs should be administered five times per week **under direct supervision**.

- The continuation period may be shortened provided that 12 months of treatment have been given after sputum conversion as demonstrated by three consecutive monthly negative cultures.

5.12.2 Management of patients with single drug resistant tuberculosis

- Standard regimen is effective in patients with bacilli singly resistant to isoniazid and/or streptomycin.
- If a patient is deteriorating clinically, MDR TB treatment should be considered.
- In patients whose treatment has failed after **two courses of chemotherapy (the second being the fully supervised standard**
  retreatment regimen), the majority (up to 80% will harbour INH and rifampicin resistant bacilli. For this reason, a second application of the
  standard re-treatment regimen is likely to fail and these patients should be considered eligible for MDR treatment.
- It cannot be emphasised strongly enough that a patient improving clinically and radiologically with a resistant TB bacilli lab report should be considered to have an abnormal lab report and investigated again rather than put on MDR treatment immediately.

5.12.3 Home care of MDR TB

After evaluation at the MDR unit, may patients can be successfully managed with ambulatory treatment provided DOT is ensured. Treatment should be taken daily at a PHC clinic nearest to where the patient resident.

Patients must be educated on basic infection control procedures:

- Safer coughing
- Sputum disposal
- Separate sleeping place
- Ventilation and sunlight.

If any of the following criteria are applicable, the patient should be admitted:

- Poor clinical condition
- Previous treatment interrupter
- Complications (ie haemoptysis)
- Major adverse drug reactions
- Poor social circumstances
- Treatment interruption (Defaulters)

  MDR treatment to be discontinued if treatment interruption (more than 2 weeks without treatment) took place **three times.**
- When side effects occur that are not potentially life threatening, every effort should be made to coach patients through intolerance by employing symptomatic palliation and providing psychological support. Drugs with known serious side effects may be given in divided doses to increase patient tolerance. Patients showing serious side effects should be referred to the specialist respiratory physician attached to the MDR unit (Prof D Pansegrouw).
- All patients on MDR TB treatment should undergo pre-treatment and **monthly** kidney function tests (UKE) – which should be evaluated and acted upon by the specialist team.
- Clinical progress should be documented monthly by a respiratory physician and a chest radiograph should be obtained at least yearly.

Every case of MDR tuberculosis should be reviewed and the reasons for the case developing should be documented.

Table 1

Intensive phase: 4 months		
	Daily dosage	
PATIENT WEGHT	**DRUG**	**DOSAGE**
<50kg	1. Kanamycin 2. Ethionamide 3. Pyrazinamide 4. Ofloxacin 5. Ethambutol or Cycloserine*	750mg 750mg 1200mg 600mg 1000mg 500mg
50 - 65kg	1. Kanamycin 2. Ethionamide 3. Pyrazinamide 4. Ofloxacin 5. Ethambutol or Cycloserine*	750mg 1000mg 1600mg 600mg 1000mg 500mg
>65kg	1. Kanamycin 2. Ethionamide 3. Pyrazinamide 4. Ofloxacin 5. Ethambutol or Cycloserine*	1000mg 1000mg 1600mg 800mg 1200mg 750mg

Continuation phase: 12-18 months		
	Daily dosage	
PATIENT WEIGHT	**DRUG**	**DOSAGE**

<50kg	1. Ethionamide 2. Ofloxacin 3. Ethambutol OR Cycloserine	750mg 600mg 1000mg 500mg
50 - 65kg	1. Ethionamide 2. Ofloxacin 4. Ethambutol or Cycloserine	1000mg 600mg 1000mg 500mg
>65kg	1. Ethionamide 2. Ofloxacin 5. Ethambutol Or Cycloserine	1000mg 800mg 1200mg 750mg

* Ethambutol to be used if strain still susceptible.

Cycloserine to be used if strain resistant to ethambutol.

Pyridoxine (B^) 150mg daily to patients on cycloserine.

5.13 MANAGEMENT OF CONTACTS OF MDR TB PATIENTS

- Manage contacts of sputum culture negative MDR-TB patients according to the standard recommendations for infected contacts of drug-susceptible TB patients.
- Identify and screen contacts of sputum smear positive MDR-TB cases rapidly.
- Child contacts aged five years and younger should be placed on the standard
- Tuberculosis preventive therapy irrespective of state of health and tuberculin skin test response and followed up closely.

6 ETHICAL ISSUES

- If a patient remains smear/culture positive after 4 months of intensive phase and **3 – 5 months of follow-up treatment,** a decision needs to be taken to shift the treatment to palliative care
- Should an MDR patient miss more than **two weeks treatment on two occasions,** the patient should be interviewed (by an empathetic and counselor) and informed that further interruption may result in curative treatment being terminated. **Expensive MDR TB**

treatment should not be restarted for a third time, except in very exceptional circumstances.

- Patients with MDR tuberculosis who have late stage AIDS have in general a very poor prognosis and therefore it will be inappropriate to embark on a course of toxic chemotherapy for MDR tuberculosis. Symptomatic treatment, full palliative and supportive care should continue.

7 CONTACT OF MDR TUBERCULOSIS PATIENTS

- Manage contacts of sputum smear negative MDR tuberculosis patients according to the standard recommendations for infected contacts of drug-susceptible tuberculosis patients.
- Identify contacts of sputum smear positive MDR-tuberculosis cases rapidly
- Child contacts aged five years and younger should who have reactive Mantoux PPD reactions (>=14mm) should be placed on preventative therapy according to the national guidelines
- In children older than five years as well as in adult contacts, a strongly reactive tuberculin test indicates infection but not necessarily disease. The decision to start treatment depends on clinical history, examination and investigation. Patients should report the first signs of possible TB.

8 HEALTH CARE WORKERS AND MULTIDRUG-RESISTANT TUBERCULOSIS

- Health care workers who test HIV positive are at greater risk to develop MDR TB disease. A person who test HIV positive or suffering any immune deficiency disease should therefore not be selected to work in the MDR unit.

IN HIGH RISK ENVIROMENTS <u>ONLY</u>, THE FOLLOWING ADDITIONAL PRINCIPLES APPLY

- Disease monitoring programme for Health Care Workers in high risk environments: Each health care worker should have a confidential disease monitoring file in which screening procedures for tuberculosis as well as other health-related data are recorded. The element of a disease monitoring programme should include the following:
  - 1 Employment profiles and baseline screening of employees
  - 1 Annual screening for those who continue to work in high risk situations
  - 1 Quarterly record of health status in high risk situations
  - 1 Post-exposure monitoring
  - 1 Preventive measures in medium to high risk situations.

9 WORKERS' COMPENSATION

Relevant legislation dealing with contamination by any infectious substance includes the Occupational Health and Safety Act (Act 85 of 1993) and the Compensation for Occupational Injuries and Diseases Act (Act 130 of 1993). All HCWs are covered by these Acts, with compensation provided at an amount determined by the Compensation Commissioner.

Tuberculosis and infections by mycobacteria other than M. Tuberculosis (MOTTS) are covered by the Act, but employees have to keep records of baseline and follow-up procedures in order to show that infections were acquired during the course of duties carrying a risk of contracting these infections.

10 TRAINING / PRACTICAL GUIDELINES

The following book is available on request from this office:

The management of Multidrug Resistant Tuberculosis in South Africa, 2nd Edition June 1999. National TB Control Programme. Department of Health.

11 CONTACT PERSON

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COMMUNICABLE DISEASE CONTROL PROGRAM

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