School of nursing

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REVISED NATIONAL TUBERCULOSIS CONTROL PROGRAMME

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BSc nursing

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Background Information

- Tuberculosis (TB) is a contagious disease caused by *Mycobacterium tuberculosis*
- Left untreated, each person with infectious pulmonary TB will infect an average of between 10 and 15 people every year.
- One in ten people infected with TB (but who are not infected with HIV) become ill with TB at some time during their life.
- People with both HIV and TB infection are much more likely to become ill with TB.

WORLD SCENERIO

- In 2009, there were an estimated 9.4 million incident cases (range, 8.9 million–9.9 million) of TB globally
- There were an estimated 14 million prevalent cases(range 12 million–16 million) of TB in 2009
- In 2009, an estimated 1.3 million deaths (range 1.2 million–1.5 million) occurred among HIV-negative cases of TB
- There were an estimated 440 000 cases of multi-drug resistant TB (MDR-TB) in 2008
- There were an estimated 0.4 million deaths (range,0.32 million–0.45 million) among incident TB cases that were HIV-positive

INDIAN Scenario

- India is the highest TB burden country accounting for more than one fifth of the global incidence.
- Global annual incidence estimate is 9.4 million cases out of which it is estimated that 1.98 million cases are from India.
  India is 17th among 22 High Burden Countries in terms of TB incidence rate (Source: WHO global TB report 2009).

TUBERCULOSIS CONTROL IN INDIA

- National TB Control Programme (NTP) 1962
- RNTCP – 1993 as pilot project
- RNTCP: 1997 expanded across the country in a phased manner with support from the World Bank and other development partners
- RNTCP I: 1997-2006
- RNTCP II: 2006-2011 (Sept.)

NTP

- Ground-breaking research in the 1950s and early 1960s by the Tuberculosis Research Centre at Chennai and the National TB Institute at Bangalore, a National Tuberculosis Programme (NTP) was implemented by Government of India in 1962.
- The NTP was implemented on a 50:50 cost sharing basis between Centre and State.
- Based on strategic principles of domiciliary treatment
- Use of a self-administered standard drug regimen of initially 12-18 months duration
- Treatment free of cost
- Priority to newly diagnosed patients over previously treated patient
- Treatment organization decentralized to district level.
- The NTP created an extensive infrastructure for TB control, with a network of 446 district TB centres and 330 TB clinics.

FAILURE OF NTP

- Inadequate budget and insufficient managerial capacity
- Shortage of drugs
- Less than 40% of patients completed the treatment
- Emphasis on x-ray diagnosis resulting in inaccurate diagnosis
- Poor quality sputum microscopy
- Multiplicity of treatment regimens.

Revised strategy RNTCP

- Augmentation of organizational support
- Increased budgetary outlay
- Use of sputum as a primary method of diagnosis
- Standardize treatment regimens
- Augmentation of the peripheral level supervision
- Ensuring a regular, uninterrupted supply of drugs up to the periphery health unit
- Emphasis on training,IEC,and Operational research
- GOI –WHO revised strategy for control of TB in India
- RNTCP application of WHO – DOTS launched in 1993 as pilot project covering
- 2.35 – 20 million population (1993-1997 The Revised National TB Control Programme (RNTCP), based on the internationally recommended Directly Observed Treatment Short- course (DOTS) strategy

OBJECTIVES

The objectives of the programme are to:

- To achieve and maintain cure rate of at least 85% among New Sputum Positive (NSP) patients.
- To achieve and maintain case detection of at least 70% of the estimated NSP cases in the community.
- **UNIQUE FEATURES OF RNTC**
- **PDistrict TB Control Society**
- **Modular training**
- **Patient wise boxes**
- **Sub-district level supervisory staff (STS, STLS)**
- **for treatment & microscopy . Robust reporting and recording system**

DOTS Strategy

- Directly observed treatment short-course chemotherapy
  - The DOTS strategy along with the other components of the Stop TB strategy, implemented under the Revised National Tuberculosis Control Programme (RNTCP) in India, is a comprehensive package for TB control.
- Systematic monitoring and accountability.
  - The programme is accountable for the outcome of every patient treated. The RNTCP shifts the responsibility for cure from the patient to the health system.

THE STOP TB STRATEGY

All components of new Stop TB Strategy are incorporated in the second phase of RNTCP. These are:

1.Pursue quality DOTS expansion and enhancement, by improving the case finding are cure through an effective patient-centred approach to reach all patients, especially the poor.

2.Address TB-HIV, MDR-TB and other challenges, by scaling up TB-HIV joint activities, DOTS Plus, and other relevant approaches.

3.Contribute to health system strengthening, by collaborating with other health programmes and general services. Involve all health care providers, public, nongovernmental and private, by scaling up approaches based on a public-private mix (PPM), to ensure adherence to the International Standards of TB care.

4.Engage people with TB, and affected communities to demand, and contribute to effective care. This will involve scaling-up of community TB care; creating demand through context-specific advocacy, communication and social mobilization.

5.Enable and promote research for the development of new drugs, diagnostic and vaccines.

Types of cases

New: A TB patient who has never had treatment for TB or has taken anti-TB drugs for less than one month is considered as a new case.

Transferred in :A TB patient who has been received for treatment in a Tuberculosis Unit, after starting treatment in another TB unit where s/he has been registered is considered as a case of transferred in.

- **Treatment after default patient:** who has received treatment for TB for a month or more from any source and returns for treatment after having defaulted i.e., not taken anti-TB drugs consecutively for two months or more and found to be smear- positive is a case of treatment after default.
- **Failure:** Any TB patient who is smear-positive at 5 months or more after initiation of treatment is considered as failure.
- **Relapse:** A TB patient who was declared cured or treatment completed by a physician and who reports back to the health facility and is now found to be sputum smear positive is a relapse case.
- **Others:** A patient who does not fit into the any of the types mentioned above. The reasons for labelling a patient under this type must be specified in the Treatment card and TB Register

Cured

- **Initially sputum smear positive patient who has completed treatment and had negative sputum smears on two occasions, one of which is at the end of the treatment is declared as cured.**

Treatment completed

- **Initially sputum smear positive patient who has completed treatment with negative smears at end of the intensive phase / two months in the continuation phase, but none at the end of treatment the treatment is declared as treatment completed , or**
- **Initially sputum smear negative patient who has received full course of treatment and has not become smear positive at the end of the treatment, or**
- **Extra pulmonary TB patient who has received full course of treatment and has not become smear positive during or at the end of treatment is also declared as treatment completed.**

MDR-TB & XDR-TB

- **MDR-TB** is defined as resistance to isoniazid and rifampicin, with or without resistance to other anti-TB drugs.
- **XDR-TB** is defined as resistance to at least Isoniazid and Rifampicin (i.e. MDR-TB) plus resistance to any of the fluoro-quinolones and any one of the second line injectable drugs (amikacin, kanamycin or capreomycin).
- **Cure rate for MDR-TB is 20-30%.**
- **RNTCP will be using a Standardised Treatment Regimen (Cat IV) for the treatment of MDR-TB cases (and those with rifampicin resistance) under the programme.**
- **Cat IV regimen comprises of 6 drugs- kanamycin, ofloxacin (levofloxacin)†, ethionamide, pyrazinamide, ethambutol and cycloserine during 6-9 months of the Intensive Phase and 4 drugs- ofloxacin (levofloxacin), ethionamide, ethambutol and cycloserine during the 18 months of the Continuation Phase. p-aminosalicylic acid (PAS) is included in the regimen as a substitute drug if any bactericidal drug (K, Ofl, Z and Eto) or 2 bacteriostatic (E and Cs) drugs are not tolerated**

Monitoring the MDR-TB patient

- Close monitoring is essential during treatment of MDR- TB patients.
- To assess treatment response, sputum smears and cultures should be performed monthly until smear and culture conversion. (Conversion is defined as two consecutive negative smears and cultures taken 30 days apart.)
- After conversion, the minimum frequency recommended for bacteriological monitoring is monthly for smears and quarterly for cultures.
- Monitoring of MDR-TB patients by a clinician should be at least monthly until sputum conversion, then every 2–3 months.
- Each patient's weight should be monitored monthly.

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