Guidelines for joint NCD- TB Collaborative activities in Kerala

Background

More than 20% of the adult population in Kerala is diabetic. Studies show that 44% of the TB patients in Kerala are also having diabetes.People with diabetes have a two to three times higher risk of getting infected with TB, compared to people without diabetes. Global evidences show that people with a weak immune system as a result of chronic diseases such as diabetes are at a higher risk of progressing from latent to active TB.

People with TB and coexisting diabetes have a four times higher risk of death during TB treatment and higher risk of TB relapse after treatment. It is important that proper care for diabetes be provided to patients suffering from TB–diabetes co-morbidity. Also, TB is associated with worsening glycaemic control in people with diabetes. Early detection can help improve care and control of both diseases.

A study which analysed TB deaths in Kerala found out that 60% of TB deaths were due to comorbid conditions mainly Non communicable diseases. Along with early diagnosis of all TB cases, screening for co-morbidity, appropriate management of co-morbidity and periodic clinical review of TB patients can prevent TB related deaths.

Other important risk factors for TB in Kerala has been identified as Tobacco and COPD. Population Attributable Risk factors for diabetes, tobacco and chronic respiratory diseases for TB in Kerala is estimated as 15%, 14% and 10% respectively. This means TB Elimination could not be achieved without properly addressing these factors.

Kerala TB Elimination Mission

Government of Kerala has launched "Kerala TB elimination mission" aligning with the Sustainable Development Goals, with objectives to achieve TB Elimination by 2025, zero deaths due to tuberculosis in the state by the year 2020 and zero catastrophic expenditure for the families of tuberculosis patients.

The Mission has been planned in four phases as follows

Phase 1: Vulnerability Mapping of the entire individuals

Phase 2: Screening for TB symptoms among the vulnerable individuals every three months

Phase 3: Vulnerability Reduction

Phase 4: LTBI detection and management

In Vulnerability mapping exercise, 13 vulnerabilities were captured for each individual and weighted scores [Tribal (3), Coastal (2), Slum dweller (1), TB in family (5), Health Care Worker (3), Mine/quarry worker (2), Present or past TB (3), Diabetes (3), Chronic respiratory disease (2), Organ dysfunction (2), Bed ridden/ palliative care (2), Smoking (3), Alcoholism (2) and Migrant (2)] were given to each vulnerability. Anybody with a score of 5 and above are actively screened for TB symptoms every three months. Individuals with diabetes alone or tobacco alone or COPD alone will not get a score of 5 to be included for active screening at community. Such individuals need to be screened for TB at NCD clinics through Intensified Case Finding.

Vulnerability Reduction: The state's future fight against TB need to focussing on reducing TB vulnerabilities like diabetes, smoking and Chronic Obstructive Pulmonary Disease. Individuals with high vulnerability to develop TB have already been identified in Phase 1 of TB Elimination Mission. The state is developing a system for reducing individuals' vulnerability to develop active TB disease by proper management of diabetes mellitus, addressing indoor air pollution, smoking and substance abuse at community level.

Strengthening Joint NCD-TB Collaborative Activities

Strengthening of NCD-TB Collaboration need to happen in the following areas

1. Intensified Case finding for TB at all NCD clinics
2. Screening of all TB patients for DM, Hypertension, Tobacco and other comorbidity and fortnightly clinical review to manage the co-morbidity appropriately
3. Vulnerability Reduction at Community and Individual level [DM, Tobacco, COPD, Indoor air pollution]
4. Prevention & screening at World of Work

1. **Intensified Case Finding for TB at all NCD clinics [including SWAAS and Tobacco Cessation Clinics]**

Four-symptoms complex screening for active TB in diabetes patients is to be done.Screening is expected to be carried out every time the patient visits the NCD clinic. Patients will be screened for **four-symptom complex (4S):**

• Cough that has persisted for more than two weeks,

• Fever of more than two weeks,

• Experiencing of significant weight loss and

• Night sweats

A seal of 4S complex **has to be placed in the NCD clinic register against each patient with Diabetes/ Hypertension/ Tobacco user after screening. The placement of seal means the patient has been screened for TB using 4S Complex**

If any ONE of the symptoms are present, then he/she is a presumptive TB case. Details need to be entered in a presumptive TB register [Format attached as Annexure 1]. A biological specimen examination form [Annexure 2] and Referral slip needs to be filled [Annexure 3] and patient need to be referred to nearest DMC/ PHI. Medical officer of PHIneeds to examine the case with/without results of Smear Microscopy and take necessary steps to ensure completing the diagnostic algorithm[X ray, NAAT] as per RNTCP guidelines. Whenever possible initial tests offered for TB testing among Diabetes patients could be a highly sensitive molecular test [CB NAAT/TRU NAAT].Patients for evaluation of any Extrapulmonary TB could also be referred to MO for evaluation. Medical Officer need to mention the final diagnosis in the referral slip.

The concerned JHI/JPHN of the area need to follow up the presumptive TB case and ensure that testing has been done. The details of tests and results are to be entered in presumptive TB register at NCD clinic. If diagnosed as TB, then patient need to be notified, treatment need to be initiated and public health actions to be ensured based on existing guidelines.

A monthly report needs to be generated from all NCD clinics at Sub centre , PHC, CHC including the details of ICF and to be compiled by the HI of the PHC. HS need to compile the report at block level. Block level report to be sent to District NCD control Office. Report

from NCD clinics of THQ/DH/GH need to be compiled and submitted to District NCD control office. Dy DMO (NCD) to share the report with DTO.

Overall responsibility of ensuring TB screening at subcentre/ PHC/ CHC is the responsibility of MO-incharge of PHC/CHC and THQ/DH/GH is concerned Superintendents.

All NCD clinics to ensure compliance with Air borne infection control guidelines with facilities to (1) screen for respiratory symptoms, (2) educate on cough etiquette and provide with a mask for all patients with respiratory symptoms, (3) ensure cross ventilation [or mixed mode ventilation with at least 6 Air current exchanges per hour] in patient waiting areas, pharmacy and laboratories by opening all windows and doors [10% of floor area on either side to have openings] and (4) fast track them in OPD, pharmacy and laboratory so that they spend minimum time in hospital/facility.

IEC materials to be displayed at all NCD clinics facilitating bidirectional screening and air borne infection control

Monitoring Indicator:

1. Number of visits of people with diabetes to NCD clinic this month
   (Data Source: NCD clinic register)
2. Out of (1), proportion screened for TB using 4 symptom complexes
   Data Source: NCD clinic register (4S complex Seal)
3. Out of (2), proportion of individuals identified as presumptive TB
   (Data Source: PTB register at NCD clinics)
4. Out of (3), proportion of individuals tested completely for TB
   (Data Source: PTB register at NCD clinics)
5. Out of (4), proportion of individuals diagnosed as TB
   (Data Source: PTB register at NCD clinics)
6. Out of (5), proportion of individuals initiated on TB treatment
   (Data Source: PTB register at NCD clinics)

Additional indicator For Block and districts

7. Number of PHIs submitted NCD-TB screening report this month

(Denominator: Total Number of PHIs)

2. Screening of all TB patients for DM, Tobacco, other comorbidity and fortnightly clinical review to manage the co-morbidity appropriately

All TB patients to be screened for Diabetes Mellitus and tobacco use. JHI/JPHN of the concerned area where the patient is residing/taking treatment from is responsible for ensuring screening for DM/Tobacco and recording it in Nikshay and Treatment card.

All TB patients need to be clinically examined fortnightly by a medical officer. Patient need to be screened for co-morbidity like hypertension and diabetes. If any co-morbidity is present, that need to be managed properly and monitored closely. TB patients with Diabetes need to be initiated on Insulin.Tobacco cessation counselling to be provided and cessation services to be offered. Deaddiction services to be offered to those who currently use alcohol.

All the details to be documented in fortnightly clinical review checklist attached to the RNTCP treatment cards.

If the TB Patients are being called to health centres for fortnightly clinical review, it is desirable to call them during non-bust timings for clinical review. A fixed day and time could be dedicated at PHC/CHC for clinical review of TB patients in a non-stigmatising and non-discriminatory way.

Monitoring Indicator:

1. Proportion of current TB patients screened for diabetes [Numerator = Number of TB patients screened for diabetes; Denominator = Number of TB patients currently on treatment] **Data Source**: NIKSHAY
2. Proportion of screened TB patients confirmed with diabetes
   [Numerator = Number of screened TB patients diagnosed with diabetes Denominator = Number of TB patients screened for diabetes] **Data Source**: NIKSHAY
3. Proportion of TB patients diagnosed with diabetes and linked with diabetes-care services
   [Numerator = Number of TB patients diagnosed with diabetes linked with NCD clinic Denominator = Number of screened TB patients diagnosed with diabetes]
   Data Source: NIKSHAY

4. Proportion of TB patients with DM with their blood sugar under control [Numerator= Number of TB patients with DM, whose blood sugars were under control; Denominator= Number of current TB patients with Diabetes]
   Data Source: Fortnightly clinical review checklist
5. Proportion of registered TB patients screened for tobacco use [Numerator = Number of TB patients screened for tobacco use; Denominator = Number of TB patients currently on treatment] **Data Source**: NIKSHAY
6. Proportion of screened TB patients with current tobacco use
   [Numerator = Number of screened TB patients with current tobacco use
   Denominator = Number of TB patients screened for diabetes]
   Data Source: NIKSHAY
7. Proportion of TB patients with current tobacco use and linked with tobacco cessation services
   [Numerator = Number of TB patients identified with current tobacco use linked with cessation service; Denominator = Number of screened TB patients diagnosed with diabetes]
   Data Source: NIKSHAY
8. Proportion of TB patients with current alcohol use
   [Numerator = Number of TB patients with current alcohol use
   Denominator = Number of TB patients screened for diabetes] **Data Source**: NIKSHAY
9. Proportion of TB patients with current alcohol use and linked with deaddiction services
   [Numerator = Number of TB patients identified with current alcohol use linked with deaddiction service; Denominator = Number of screened TB patients identified with current alcohol use]
   Data Source: NIKSHAY
10. Proportion of current TB patients undergone fortnightly clinical review
    [Numerator: Number of TB patients with at least ONE documented clinical review in the month Denominator: Number of TB patients currently on treatment]
    Data Source: Fortnightly Clinical Review Checklist

Coordination Mechanisms for Planning, Implementation, Monitoring and Review

To ensure smooth implementation and regular review of RNTCP and NPCDCS collaborative activities, a State Coordination Committee (SCC) on TB–NCD comorbidities, chaired by Director of Health Services need to be established. Other members of the committee are Additional Director (PH), State NCD program officer, State TB Officer, SWAAS Nodal Officer, Dy DHS (Mental Health), Mass Media Officer, Programme officers from NPCDCS and RNTCP, TB and NCD experts from academic and research institutes

District Coordination Committee to be chaired by District Medical Officer. Other members are DTO, Dy DMO (NCD), SWAAS nodal officer, District Mental Health Nodal Officer, Technical Assistants, District Nursing Officer, Mass media officer, TB and NCD experts from academic institutes.

Co-ordination committees need to meet once in a month to plan, monitor and review the joint collaborative activities. All meetings and proceedings to be documented.

MOTCs to supervise and monitor the activity in concerned TUs and Block TBE officer to help the Block MOs in supervisions, monitoring and review of the collaborative activities.

The indicators need to be reviewed Monthly at PHC, Block and District level andState level. The same need to be presented at TB Elimination boards at district and state and task forces at LSG, district and state.

Joint Internal Evaluations and supervisory visits need to be conducted with officials from both NCD and RNTCP.

Annexures

Annexure 1: Presumptive TB register

Annexure 2: Request form for biological specimens

Annexure 3: Referral slip for PTB from NCD clinic

Annexure 4: Model 4S complex screening seal

Annexure 5: Fortnightly Clinical Review Checklist

Annexure 6: NCD Clinic Reporting Formats [SC, PHC, CHC. THQ, DH. GH]

Annexure 7: Block level Consolidation Report

Annexure 8: District level Consolidation Report