Interview guide

Participant ID:

Start time:

End time:

Date:

Place (be specific)/ Online:

Introduction

Hi, I am Dr XX. I will be interviewing you today regarding your experiences and opinions regarding differentiated TB care in Kerala state. These interviews are part of an inquiry which aims to explain the reasons for mortality among patients with TB in Kerala and develop a potential model to address these. Thank you for agreeing for the interview. Can we start?

Question 1

Could you please introduce yourself and your role in NTEP programme?

Probes:

1. Years of experience in healthcare system/health service
2. Key professional capacities
3. Experience in TB care and policy making
4. Professional capacities as a TB care professional/program/policy person
5. Specific role in NTEP and the duties currently delivered

Question 2

What are your thoughts on the present status of TB care and deaths due to TB in Kerala?

Probes:

1. Current status of TB care in the state specifically from a program perspective
2. Based on your experience as a program officer, how far have the programmatic initiatives come in the state in terms of TB care?
3. How satisfied are you with our TB related program activities?
4. What do you think of the TB related outcomes of the state in terms of recurrent infections, drug resistance and mortality?
5. What have you gathered from the stakeholders of the TB program in state regarding the activities, especially the patients and the stakeholders? What are their major complaints/reservations?
6. How do look at the mortality figures reported from Kerala compared to national figures and that of other states?

Question 3

In your opinion what could be the specific reasons for deaths among persons with TB in Kerala?

Probes:

1. Good reporting has a significant role to play with the relatively higher figures compared to other states, and we agree with that.
2. But, beyond reporting – any other gaps in programmatic initiatives contributing to high mortality?
3. Co-morbidities and their management - diabetes mellitus? The NCD program – TB program link?
4. Tobacco and alcohol?
5. Nutrition?
6. Drug availability?
7. Follow-up regularity?
8. Medication adherence?
9. Private sector?
10. Infrastructural and human resource constraints in the system?
11. Laboratories and investigations?
12. Transportation and other logistics issues?
13. Attitudes and training of the program staff?
14. Technical issues with the documentation portals
15. Financial and other constraints affecting the patients and the caregivers
16. Attitudes of the patients and the caregivers?
17. Any other

Question 4

Those insights are very valuable. Now based on what we know about the potential reasons for the TB related mortality in the state, how do you think we can work towards reducing them?

Probes:

<u>General suggestions to address any of the programmatic gaps mentioned</u> - strengthening the NCD program, identifying and managing diabetic patients, addressing tobacco and alcohol addiction, strengthening the implementation of nutritional support schemes like DBT, tie ups with the private sector, support for documentation, strengthening the training, better awareness among patients, efforts to address infrastructural, HR and logistics issues and so on.

<u>Specific suggestions pointing towards a differential care model</u>

1. Differential care for patients according to the disease severity/risk factors like nutrition, co-morbidities, and tobacco/alcohol status
2. Triaging to identify the risk status
3. Systemic efforts to focus on older patients, those with more severe symptoms/signs, co-morbidities like DM, tobacco/alcohol users, nutritional deficiencies, recurrent/drug-resistant cases and so on.
4. Any other suggestions

Question 5

Your suggestions point to a more targeted approach to prevention of TB-related mortality in the state by focusing on patients with severe disease or co-morbidities**.** As you maybe already aware, in 2021, the NTEP had suggested something called a differential TB care model. In this model, to reduce TB deaths in resource-limited settings, a differentiated care strategy is used to triage patients with high risk of severe illness (i.e., those with very severe undernutrition, respiratory insufficiency, or inability to stand without support) at diagnosis and refer them for comprehensive assessment and inpatient care. *The model has been successfully implemented in our neighbouring state of TN under the name of TNKET.* What do you think of such an approach for mortality reduction in Kerala?

Probes:

1. How relevant would such an approach be in Kerala?
2. How feasible would such an approach be?
3. What elements could be incorporated in such an approach considering the specific context of Kerala?

Question 6

This research team has worked out a basic design for a differential TB care model for Kerala. We would like your input to refine it for the state. Please take a look at this model. Allow the informant about 4-5 minutes to quickly go through the image. Then probe further along the following lines:

Probes:

1. As you see, we have conceptualized the comprehensive care pathway focusing on 4 components – disease severity, DM status, tobacco use and alcohol use. What other aspects need to be included in the pathway, if any?
2. The first component is triaging all diagnosed patients with TB using a paper-based triage tool. The triage tool includes weight, height, BMI, leg swelling, respiratory rate, Oxygen saturation, and ability to stand without support. If at least one of these is

positive, the patient is eligible for referral. What are your thoughts about the triaging criteria? How valid and reliable are they? How feasible is triaging under the present circumstances? What are the barriers that you anticipate? Are there any facilitating factors?

3. The triage positive patients are referred to nodal treatment centre for assessment by physician/ pulmonologist and in patient management. This, we think could be very significant in mortality reduction. What is the current status of the nodal treatment centres? How feasible is such a referral of triage-positive patients under the present circumstances? How feasible are admissions of triage positive patients in nodal treatment centres? What infrastructural, HR and logistics gaps exist, if any, in ensuring this? What are the barriers that you anticipate? Are there any facilitating factors?
4. The second component includes the screening of all patients with TB and diabetes for fasting blood glucose (FBG) at diagnosis, and 2 months. What are your thoughts about this component? How relevant is this component for the reduction of TB-related mortality? How feasible is it to ensure that the diabetes status of all patients with TB be known to us? What is the current scenario in this regard? What infrastructural, HR and logistics gaps exist, if any, in ensuring this? What are the barriers that you anticipate? Are there any facilitating factors?
5. Further, if the FBG is ≥250 mg/dl, the patients need to be referred for insulin and inpatient care. What are your thoughts about this component? How relevant is this component for the reduction of TB-related mortality? How feasible is it to ensure that all the patients with FBG is ≥250 mg/dl receive insulin? How effective is the supply chain and storage to realise this? What is the current scenario in this regard? What infrastructural, HR and logistics gaps exist, if any, in ensuring this? What are the barriers that you anticipate? Are there any facilitating factors?
6. The third component includes the assessment of all patients with alcohol use for harmful use of alcohol and refer to deaddiction centres (“Vimukthi”) for management. What are your thoughts about this component? How relevant is this component for the reduction of TB-related mortality? How feasible is it to ensure that all the patients with alcohol use be assessed? We propose the use of CAGE questionnaire for assessment which is easy and quick. [**Describe the criteria briefly in the informant is unfamiliar with the questionnaire]**. How feasible and valid do you think the questions are? What infrastructural, HR and logistics gaps exist, if any, in ensuring this assessment and

referral? What about the intake capacity and admission procedures in the Vimukthi centres? What are the barriers that you anticipate? Are there any facilitating factors?

7. The fourth and final component includes the assessment of all patients with smoking for nicotine dependence and refer to Tobacco cessation centres for moderate and high addiction. What are your thoughts about this component? How relevant is this component for the reduction of TB-related mortality? How feasible is it to ensure that all the patients with smoking be assessed for nicotine dependence? We propose the use of "Heaviness of smoking index" for assessment which is easy and quick. [**Describe the questions briefly in the informant is unfamiliar with the index]**. How feasible and valid do you think the index is? What infrastructural, HR and logistics gaps exist, if any, in ensuring this assessment and referral? What about the intake capacity and admission procedures in the tobacco cessation centres? What are the barriers that you anticipate? Are there any facilitating factors?

Question 7

In your opinion what are the system level facilitators and barriers for implementing a differentiated TB care model in Kerala?

Probes:

1. Policy level facilitators? Anything conducive for the implementation? Who could be our allies? What response do you anticipate from the health ministry? Any other government organizations? Private sector?
2. Policy level barriers if any? Competing priorities? Resource constraints at the top administrative level?
3. Who will take the initiative?
4. How about the levels of implementation? Can we start at the PHCs?
5. Human resource constraints
6. Training related constraints
7. Infrastructural constraints
8. Logistics constraints

Question 8

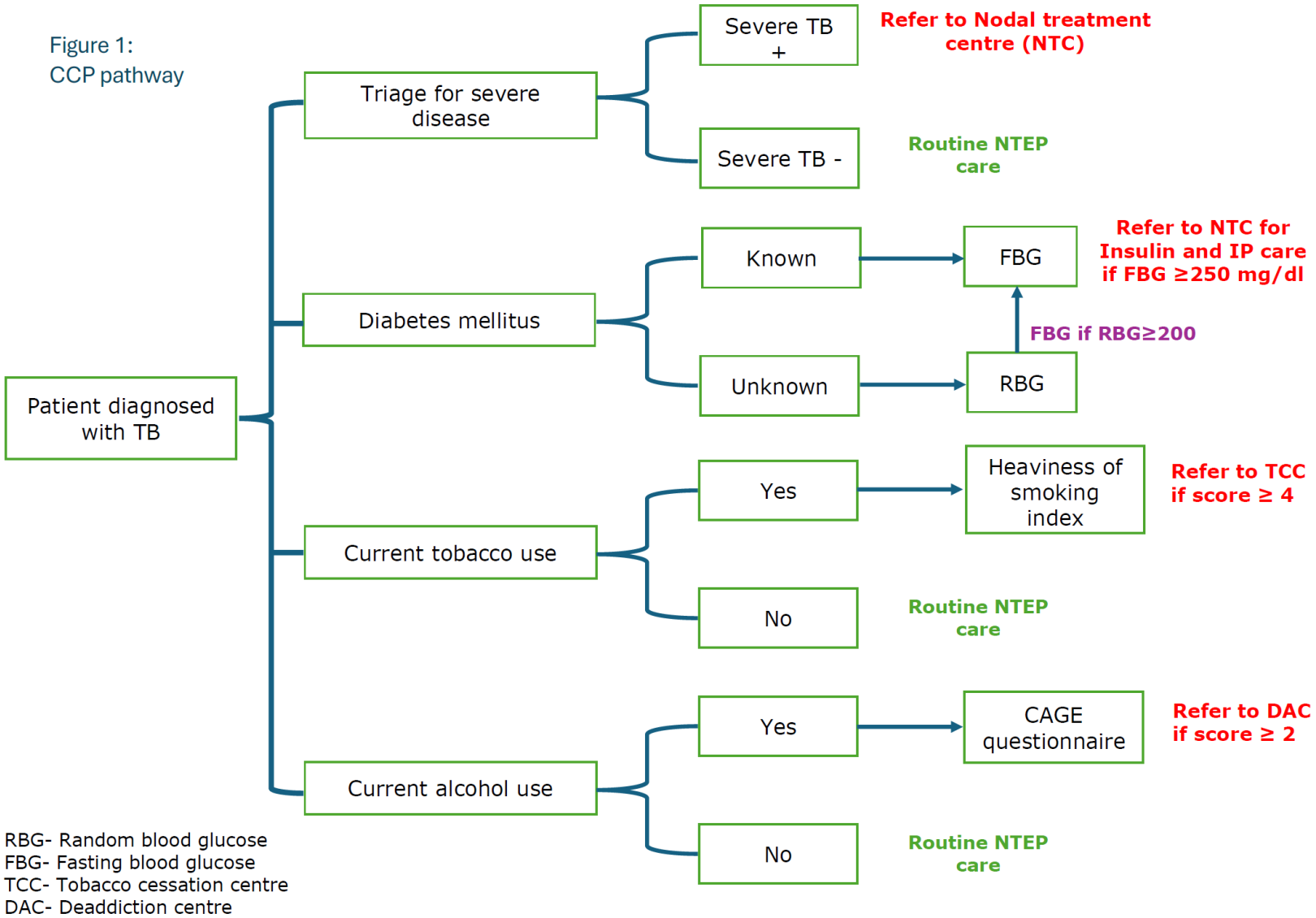
Thank you for your valuable insights. We will definitely refine the model based on your input and get back to you for your feedback.

In your opinion how can this type of a differential care model to prevent TB-related deaths be successfully implemented in the state?

Probes:

1. How hopeful are you about the successful implementation of this initiative?
2. Would you be willing to advocate for such a model?
3. Would you be willing to take a leadership role in its implementation?
4. Who else could we approach to discuss further about the pros and cons of this approach?
5. Who else could be our potential allies in working towards the implementation?
6. What strategies or approaches do you suggest pushing this model forward?

Figure 1:
CCP pathway



RBG- Random blood glucose
FBG- Fasting blood glucose
TCC- Tobacco cessation centre
DAC- Deaddiction centre