"Effectiveness of the Patient Provider Support Agency (PPSA) Model in Improving Private Sector Engagement for Tuberculosis Care in Alirajpur"

INTRODUCTION:

TUBERCULOSIS DISEASE AND ITS BURDEN

Certainly! Tuberculosis (TB) continues to pose a significant public health challenge in India, where it accounts for a large share of the global TB burden. In 2022, India saw around 3 million new TB cases and over 400,000 TB-related deaths. To tackle this, the Indian government has implemented various initiatives:

1. National Tuberculosis Elimination Program (NTEP): A comprehensive program aiming to eliminate TB by 2025. It focuses on early detection, effective treatment, and preventive measures.

2. TB Mukt Bharat (TB Free-India) Infection Prevention and Control (IPC) Project: This project emphasizes IPC measures in healthcare facilities, households, and the community to prevent TB transmission.

3. TB-Mukt Panchayat: A community-level effort led by Prime Minister Narendra Modi to raise awareness and engage local leaders in TB control.

4. Shorter TB Preventive Treatment (TPT): Nationwide rollout of shorter and more effective preventive treatment for high-risk individuals.

5. Family-Centric Care Model for TB: Providing holistic care to TB patients and addressing social determinants of health.

6. Annual TB Report: Regular reporting and monitoring of TB cases and progress.

Tuberculosis (TB) remains a significant public health challenge in India, which bears the highest burden of the disease globally. Alirajpur, a district in Madhya Pradesh, is no exception, grappling with high TB incidence and significant barriers to effective diagnosis, treatment, and patient adherence. Despite extensive efforts by public health programs, a considerable proportion of TB patients seek care in the private sector, where variations in the quality of care and under-reporting of cases pose critical challenges to TB control.

In response to these challenges, the Patient Provider Support Agency (PPSA) model has emerged as a promising approach to bridge the gap between public health efforts and private sector engagement. The PPSA model is designed to integrate private healthcare providers into the national TB control framework, ensuring standardized care, comprehensive case reporting, and enhanced patient support. By fostering partnerships, providing resources, and incentivizing private practitioners, the PPSA model aims to create a cohesive and effective strategy to combat TB.

This study aims to evaluate the effectiveness of the PPSA model in improving private sector engagement for TB care in Alirajpur. The research focuses on key aspects such as the mapping of

private health facilities, notification and reporting of TB cases, implementation of Universal Drug Susceptibility Testing (UDST), and the provision of patient support services. Additionally, the study will examine the impact of the PPSA model on treatment adherence, contact tracing, and preventive measures within the private sector.

Through a comprehensive analysis of the PPSA model's implementation and outcomes in Alirajpur, this research seeks to provide valuable insights into the potential of public-private partnerships in strengthening TB control efforts. By highlighting best practices, challenges, and areas for improvement, the findings aim to inform policy decisions and contribute to the national goal of TB elimination by 2025.

PPSA MODEL (Patient Provider Support Agency)

The PPSA model stands for Patient Provider Support Agency. It is a model under which a third-party agency/NGO is selected by a state/city/district RNTCP unit to engage private-sector doctors treating patients of TB and provide end-to-end services, such as diagnosis, notification, patient adherence and support, and treatment linkages. The model is implemented by RNTCP with support from the PPSA-NGO.

RESEARCH QUESTIONS:

1. How effective is the Patient Provider Support Agency (PPSA) model in improving private sector engagement for tuberculosis (TB) care in Alirajpur?
2. What impact does the PPSA model have on the notification and reporting of TB cases by private healthcare providers in Alirajpur?
3. How does the implementation of Universal Drug Susceptibility Testing (UDST) through the PPSA model influence TB diagnosis and treatment in private health facilities?
4. In what ways does the PPSA model enhance treatment adherence among TB patients treated in the private sector?
5. What role does the PPSA model play in ensuring the comprehensive support and follow-up of TB patients in private care, including contact tracing and preventive treatment?
6. What are the barriers and facilitators to the successful implementation of the PPSA model in Alirajpur?

OBJECTIVES:

1. To evaluate the effectiveness of the PPSA model in enhancing private sector engagement for TB care in Alirajpur, Madhya Pradesh.
2. To assess the impact of the PPSA model on the notification and reporting rates of TB cases by private healthcare providers.
3. To evaluate the implementation and outcomes of Universal Drug Susceptibility Testing (UDST) facilitated by the PPSA model in private health facilities.
4. To determine the effectiveness of the PPSA model in improving treatment adherence among TB patients in the private sector.
5. To analyse the extent to which the PPSA model ensures comprehensive patient support, including contact tracing and preventive treatment for TB.
6. To identify and document the barriers and facilitators encountered during the implementation of the PPSA model in Alirajpur.

MATERIAL AND METHODS:

a) **STUDY DESIGN: -** This study employs a mixed-methods approach, combining quantitative and qualitative methods to evaluate the effectiveness of the Patient Provider Support Agency (PPSA) model in improving private sector engagement for tuberculosis (TB) care in Alirajpur, Madhya Pradesh.

b) **SETTING: -** The research will be conducted in Alirajpur district, Madhya Pradesh, focusing on private health facilities engaged through the PPSA model. The district has a diverse healthcare landscape, with a mix of private practitioners, AYUSH doctors, and unregistered practitioners.

c) STUDY POPULATION: -

The population considered to study the effectiveness of the Patient Provider Support Agency (PPSA) model in improving private sector engagement for tuberculosis care would typically include:

a. Private Sector Healthcare Providers: This would involve studying doctors, chemists, laboratories, and other healthcare professionals in the private sector who are involved in diagnosing and treating TB patients.
b. TB Patients in the Private Sector: The focus would be on individuals seeking TB care in the private sector, including those who may have been undiagnosed or unreported.
c. PPSA Staff and NGOs: Research may also involve studying the staff and personnel involved in implementing the PPSA model, including those working for the selected NGO responsible for managing the program.
d. Public Health Officials: This could include City TB Officers, District TB Officers, and other public health officials responsible for overseeing the implementation of the PPSA model and monitoring its effectiveness.
e. Key Stakeholders: This may involve engaging with stakeholders such as government health officials, TB program managers, professional associations, and other organizations involved in TB care and control.

The study population includes:

- Private healthcare providers participating in the PPSA model.
- TB patients diagnosed and treated in private health facilities in Alirajpur.
- Program implementers and stakeholders involved in the PPSA model.

d. STUDY TOOL: -

The study tool used in evaluating the effectiveness of the Patient Provider Support Agency (PPSA) Model in improving private sector engagement for tuberculosis care is a toolkit. The toolkit provides a comprehensive guide for decision-makers and implementers to seamlessly introduce the PPSA model in their region. It serves as a guiding document that outlines the steps to implement PPSA, including needs assessment, mapping exercises, designing the

model and budget, hiring and training the PPSA-NGO, implementing the model, and monitoring its performance.

The toolkit includes information on the background of the PPSA model, frequently asked questions, the five steps to operationalize PPSA, recommended team structure, and a summary of key points. It also contains figures and tables illustrating the process flow, data required for monitoring and evaluation, and a fictional budget to help design and budget for PPSA in a specific region.

Overall, the toolkit serves as a practical tool for implementing the PPSA model and includes all the necessary information, guidelines, and resources needed to assess and implement the model effectively in the context of improving private sector engagement for tuberculosis care.

e. DURATION OF STUDY: - 3 Months (1 April,2024- 30 June,2024)

f. SAMPLE SIZE: -

- Sputum Samples: Target of 350 sputum samples per month.
- TB Case Notifications: Target of 20 TB case notifications per month from private health facilities.

g. **SAMPLING TECHNIQUE: -**

- **TB Notification and Reporting**: Monthly data on TB case notifications from private health facilities will be collected and analyzed to assess reporting rates.
- **Sputum Collection and Testing**: Data on the number of sputum samples collected and tested using Universal Drug Susceptibility Testing (UDST) (Naat + Culture) will be tracked. The target is to ensure at least 70% UDST testing for notified private cases within 7 days of notification.
- **Treatment Adherence**: Records of treatment adherence and completion rates among TB patients treated in the private sector will be maintained.
- **HIV and DM Screening**: Data on the number of TB patients screened for HIV and diabetes mellitus within seven days of notification will be collected.
- **Extra-Pulmonary TB Testing**: Data on the availability and use of extra-pulmonary TB testing facilities, and the outcomes of these tests.
- **Contact Tracing and Preventive Treatment**: Data on contact tracing activities, the number of contacts traced, and the preventive treatment provided.
- **In-depth Interviews**: Conduct interviews with private healthcare providers, TB patients, and program implementers to gather insights into the experiences, challenges, and facilitators related to the PPSA model.
- **Focus Group Discussions**: Organize focus group discussions with patients and healthcare providers to understand their perspectives on the PPSA model and its impact on TB care.
- **Field Observations**: Perform field observations in private health facilities to document the implementation process of the PPSA model and identify any operational challenges.

DATA ANALYSIS PLAN:

The data analysis plan for evaluating the effectiveness of the Patient Provider Support Agency (PPSA) Model in improving private sector engagement for tuberculosis care would likely involve a combination of quantitative and qualitative methods to assess various aspects of the program. Here are some key components that may be included in the data analysis plan:

Quantitative Data Analysis:

- Data will be entered into a secure database and analyzed using statistical software (e.g., SPSS, STATA).
- Descriptive statistics will be used to summarize data on TB notifications, sputum sample collection, UDST testing, treatment adherence, and screening activities.
- Comparative analysis will be conducted to evaluate changes in TB notification and treatment outcomes before and after the implementation of the PPSA model.

Qualitative Data Analysis:

- Interviews and focus group discussions will be transcribed verbatim and analyzed using thematic analysis.
- NVivo software will be used to code and categorize qualitative data, identifying common themes and patterns related to the effectiveness and challenges of the PPSA model.

Monitoring and Evaluation:

- Develop monitoring indicators to track the progress of the PPSA program, including private sector engagement rates, TB notification rates, treatment adherence rates, and patient outcomes.
- Regularly review and analyze monitoring data to assess the performance of the PPSA model and make data-driven decisions for program improvement.

By combining quantitative and qualitative analysis methods and incorporating monitoring and evaluation processes, researchers can comprehensively evaluate the effectiveness of the PPSA model in improving private sector engagement for tuberculosis care and generate valuable insights for program optimization and scale-up.

ETHICAL CONSIDERATIONS:

a. **Informed Consent**: Written informed consent will be obtained from all participants before data collection.
b. **Confidentiality**: Participant confidentiality will be maintained by assigning unique identifiers and storing data securely.
c. **Ethical Approval**: The study protocol will be submitted for ethical approval to the relevant institutional review board.

IMPLICATIONS OF RESEARCH:

The implications of research on the effectiveness of the Patient Provider Support Agency (PPSA) Model in improving private sector engagement for tuberculosis care can have significant implications for public health policy, program implementation, and patient outcomes. Here are some potential implications of the research findings:

1. ***Policy Recommendations***: The research findings can inform policy recommendations at the national, state, and district levels regarding the integration of the PPSA model into existing tuberculosis control programs. Policymakers can use the evidence to advocate for the expansion of private sector engagement initiatives to improve TB care delivery.

2. ***Program Optimization***: The research can provide insights into the strengths and weaknesses of the PPSA model, allowing program managers to optimize the implementation of the model. Recommendations based on research findings can help streamline processes, enhance service delivery, and address challenges in private sector engagement.

3**. *Capacity Building***: Research findings can highlight the need for capacity building initiatives for healthcare providers, PPSA staff, and other stakeholders involved in the program. Training programs can be tailored to address specific areas identified in the research for improving private sector engagement and TB care delivery.

4. ***Quality Improvement***: The research can lead to quality improvement initiatives within the PPSA model, focusing on enhancing diagnostic services, treatment adherence, patient support, and monitoring mechanisms. Identifying areas for improvement based on research findings can drive quality enhancement efforts.

5. ***Patient Outcomes***: Understanding the impact of the PPSA model on patient outcomes, such as TB notification rates, treatment adherence, and treatment success rates, can guide efforts to improve patient care and health outcomes. Research findings can inform strategies to enhance patient support and follow-up mechanisms.

6. ***Scale-Up and Replication***: Positive research findings can support the scale-up and replication of the PPSA model in other regions or countries facing similar challenges with private sector engagement in TB care. Lessons learned from the research can be applied to expand the model and improve TB control efforts globally.

Expected Outcomes

- ✓ Improved TB notification and reporting rates from private health facilities.
- ✓ Increased adherence to TB treatment protocols among private sector patients.
- ✓ Enhanced collaboration between public and private healthcare providers.
- ✓ Identification of barriers and facilitators to the successful implementation of the PPSA model.

Roles and Responsibilities as District Program Manager at Alirajpur

Mapping and Notification

- Map health facilities and engage practitioners.
- Provide sputum collection resources.
- Involve AYUSH doctors.

UDST (Naat + Culture) Testing

- Facilitate and ensure timely testing.

Collecting Bank Details and ABHA ID

- Collect and validate bank details and ABHA IDs.
- Assist with bank account openings.
- Update Nikshay Portal

HIV and Diabetes Screening

- Screen for HIV and diabetes.

Extra-Pulmonary Testing

- Ensure specialist availability and infrastructure.
- Collect samples as per guidelines.

Ensuring Successful Treatment

- Conduct confirmatory tests and provide outcomes.

Sputum Collection and Transportation

- Establish collection centres.
- Track collection and transportation.
- Appoint runners.

Contact Tracing and Preventive Treatment

- Conduct geo-mapping and contact tracing.
- Continue preventive treatment.

Doorstep Delivery of Drugs

- Facilitate monthly drug delivery.