



## Health Services Performance for TB Treatment in Two Districts of Punjab –DHQ, Sahiwal & BVH, Bahawalpur.

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### Abstract

**Introduction:** Pakistan ranks 5th among the 22 countries with the highest incidence levels of tuberculosis (TB) smear-positive case; TB remains the leading killer infectious disease in the world, with 1.7 million death.

**Objective:** The objective of our study is to determine the health services performance for TB treatment in DHQ, Sahiwal and BVH, Bahawalpur with the attributes for treatment.

**Methodology:** For this cross-sectional study 100 TB patients were identified through simple random sampling. Relevant information was collected by using the Primary Care Assessment Tool adapted for TB care. Data was entered and analyzed by SPSS version 22 and presented as number and percentages.

**Results:** Results from both cities for male and female patients were recorded with respect to "Access to treatment", "Home visits", "bond", "professional respond clearly" and "range of services". The dimension "coordination", "family focus", and "Professional ask about living conditions" were also recorded.

**Conclusion:** Incentives to improve care organization and management practices can contribute towards a better performance of health services in TB treatment in Pakistan and all over the world.

**Keywords:** Health services, Performances, TB treatment.

### Introduction:

Although tuberculosis (TB) is largely a preventable and curable disease yet it is still a major cause of death particularly in underdeveloped countries; TB is ranked among top ten causes of death worldwide.<sup>1</sup> In 2016 WHO reported that 10 million people diagnosed having TB; with 1.7 million death in same year.<sup>2</sup> About 56% patients infected with Mycobacterium tuberculosis reside in India, Indonesia, China, Philippines, and Pakistan in that order.<sup>1</sup> Scenario is more gloomy when looked at WHO Eastern Mediterranean region where share of Pakistan is 61%.<sup>3</sup> Unfortunately Pakistan has the fourth highest prevalence of multidrug-resistant TB (MDR-TB) globally. Despite measures; prevalence of TB is increasing. Additional 32,534 new and relapsed case of TB were diagnosed in 2016 as compared to 2105.<sup>4</sup> WHO, along with other developmental partners started STOP Tuberculosis Programme, providing support to the national and the provincial TB control programs of Pakistan. The National TB Control

Programme, is working for development of uniform policies and strategies to control TB in Pakistan with apparent success as mortality rates between 2012-2016 showed significant reduction in deaths from 34 to 16 per 100,000 population, however still TB is major killer in Pakistan.<sup>5-7</sup> Directly observed therapy (DOT) started by Pakistan National Tuberculosis Programme in 2005 and began public private model to improve implementation of the DOT, yet Pakistan is still among high burden multidrug resistant country.<sup>8,9</sup> WHO "Stop Strategy" emphasize in achieving the patient-centered approach to TB treatment and easy access to high quality TB treatment on equality basis.<sup>10</sup> The patient-centered approach is based upon five principles and these includes "recognize patient rights", "enable partnership", "empower and activate patients and communities", "engage all stakeholders", and "monitor and document".<sup>11</sup>

Pakistan has considerably invested in health system reform, including the development of new primary health care (PHC)

organization and delivery models. Pakistan presently has access, range of services, coordination, bond and family focus for the treatment of TB. However disease control cannot be achieved merely through medical advances, new diagnostic tests and new drugs. It is important to consider the scenarios and complexity of health care services' context, where technologies are actually incorporated and offered to the community. Currently, research is also lacking a detailed analysis of the interaction between available technologies for TB control and the diversity of local health system contexts, considering the resources, political project and the willingness of local health managers and health care workers. Research on the evaluation of PHC performance in TB control in Pakistan show that the different care models present in the cities aggregate local (political/organizational/human) specificities, entailing heterogeneity in the dynamics of coping with the disease. Considering the diversity of health local systems, regional disparities and inequalities in access to health services that characterize Pakistan, it is appropriate to investigate how health care services carry out TB treatment actions. Thus, this study proposed to evaluate the performance of health services in TB treatment in two different cities of Pakistan's regions.

**Methodology:**

100 diagnosed patients of TB (50 from each hospital DHQ, Sahiwal and Civil RYK) receiving treatment at TB clinic from June 2016- July 2016 were approached by close ended questionnaire and face to face interview. Questionnaire includes 5 indicators: 1-Indicators for treatment access, 2-Indicators of bond, 3-Indicators of range of service, 4-Indicators of co-ordination and 5th indicators of family focus.

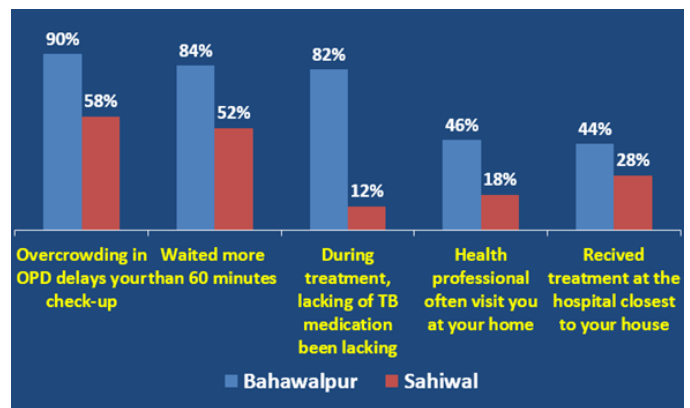
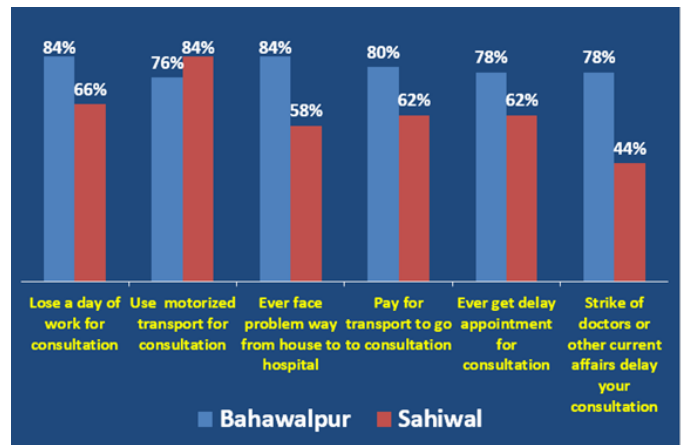
**Results:**

In "Access to treatment" it was evaluated that 'overcrowding in OPD delays check-up' of male; n=29(39.2%), female; n=45 (60.8%) in both cities. 'Home visits' displayed poor results - male n=11(34.4%), female; n=21(65.6%). In dimension "bond" it was assessed that 'treatment by same professional' in both cities , male; n=12(31.6%) and female; n=26(68.4%) . 'professional respond clearly' in both cities were, male; n=28(50%), female; n=28(50%). In dimension "range of services" it was evaluated that 'patients done sputum examination for TB diagnoses were male; n=36(40%) and female; n=43(59.6%) in both cities. The dimension "coordination" was evaluated that 'professional from hospital get medical records' of male; n=24(36.4%) and female; n=42(63.6%) in both cities. The dimension "family focus" was evaluated that 'professional ask about family disease' male; n=41(45.1%) and female; n=50(54.9%). 'Professional ask about living conditions' was seen in male; n=39(42.9%) and female; n=52(57.1%) in both cities.

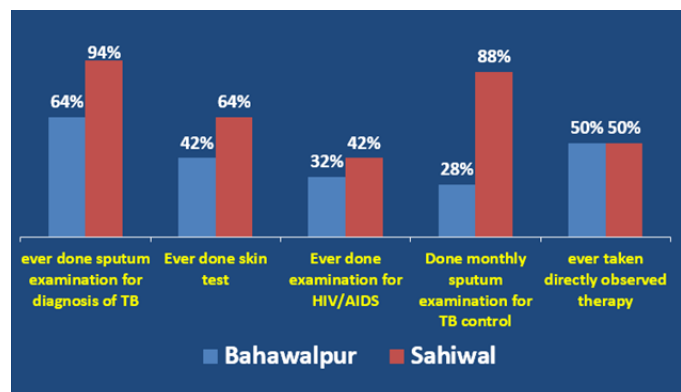
Questionnaire includes 5 indicators.

- 1-Indicators for treatment access
- 2-Indicators of bond
- 3-Indicators of range of services
- 4-Indicators of co-ordination
- 5-Indicators of family focus

**1: Indicators for treatment access.**



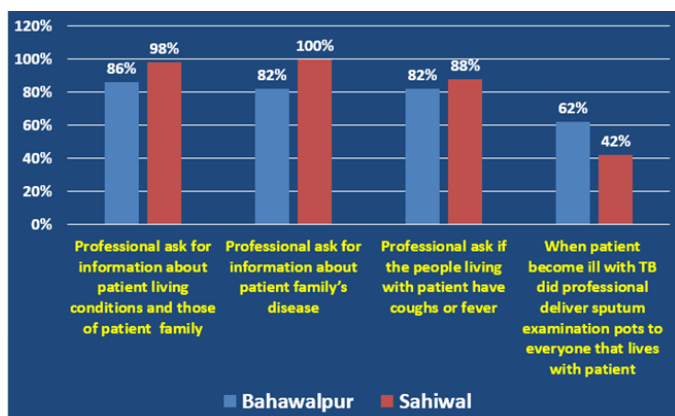
**2: Indicators of Bond**



#### 4: Indicators of Coordination.



#### 5: Indicators of family focus.



#### Discussion:

The results regarding the socio-demographic profile of the TB patients interviewed seem to be similar to those found in most national and international scientific literature, reinforcing the relationship between the disease and social vulnerability demonstrating that the disease mostly affects males and individuals with intermediate education levels.<sup>12</sup> The organization of TB patient care in the study cities presented heterogeneity, with treatment coexisting at two types of health services, predominantly medical consultations for treatment at TRC. Some authors reveal that regional disparities and social inequality are strong elements that corroborate the diversity in care delivery.<sup>13</sup> Although the medication is free of charge, indirect costs and losses, such as transport and wages lost, respectively, may turn treatment unfeasible and follow-up difficult. To overcome this impasse, some countries propose a health system that combines

an outpatient referral unit, a defined team for specialized management at district level, which is responsible for treatment, supervision and monitoring. These aspects permit the development of shared responsibilities between patients and health care professionals and the acknowledgement of individual subjectivities involved in the care process indicate that the "bond" could be more related to the relationship the user establishes with the health service than to the service location in the geographic area. The dimension "range of services" was evaluated as regular in the five cities, showing that patients face a lack of social support and collective actions. In daily TB treatment situations, even simple cases require the involvement of great care complexity. They demand epidemiological surveillance, clinical actions supported by therapeutic techniques and by integration between individual and collective care, curative and preventive actions, and care and educative activities.<sup>14</sup> Health teams' performance requires more than a clinical approach, and also needs a policy that guarantees the insertion of TB control actions in the health system.<sup>15</sup> The dimension "coordination" was well evaluated in its three indicators and reflects health care professionals' concern related to patient follow-up. For a more detailed analysis of this dimension, other elements are required, such as the analysis of health care service integration, information system quality and reference mechanisms. Therefore, TRC should act as a support for training, supervision, monitoring and evaluating TB care at the different health system levels. Thus, specific technologies for TB patient treatment and care could be guaranteed, integrating them with other PHC attributes and promoting co-responsibility at all healthcare levels. The struggle for political spaces, ideological and technological aspects remain as obstacles for the achievement of health service integration.<sup>16</sup> Some limitations and difficulties that were identified in this study are related to the organizational characteristics of the health system and TB care in the cities and to the method (sample size for each city, interviews in violent areas that required the presence of a health care professional, difference in treatment conduction among sites (centralized and decentralized services) and the instrument that needed to be readapted for each treatment organization mode. An operational and epidemiological TB research group enhanced the project development, which works in an integrated way within cities and health services.

#### Conclusions:

One can affirm that two types of obstacles exist for health service performance in TB treatment in the cities under analysis, mainly in the Northeast. The first is structural and derives from difficulties to access health services and actions. The second is organizational and derives from the way health technologies and services are distributed and integrated. Incentives to improve care organization and management practices, including the integration of primary, secondary and tertiary services, can contribute towards a better performance of health services, and mainly PHC, in TB treatment.

#### Conflict of Interest:

All authors declare no conflict of interest.

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