Tracking Patient Pathway for Assessing Public Health and Financial Burden to Community for Pulmonary Tuberculosis: Pointer from Central India

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Abstract : Background: Patients with undiagnosed pulmonary TB predominantly act as reservoirs for its transmission through 10-15 secondary infections in the next 1-5 Yrs. Delays in the diagnosis and treatment may worsen the disease with increase the risk of death. Factors responsible for such delays by tracking patient pathways to treatment may help in planning better interventions. The provision of 'free diagnosis and treatment' forms the cornerstone of the National Tuberculosis Elimination Programme (NTEP). OOPE is defined as the money spent by the patient during TB care other than public health facilities. Free TB care at all health facilities could reduce out-of-pocket expenses to the minimum possible levels. Material and Methods: This cross-sectional study was conducted among randomly selected 252 TB patients from Nov – Oct 2022 by taking in-depth interviews following informed verbal consent. We documented their journey from initial symptoms until they reached the public health facility, along with their 'out-of-pocket expenditure' (OOPE) pertaining to TB care. Results: Total treatment delay was 91±72 days on average (median: 77days, IQR: 45-104 days), while the isolated patient delay was 31±45 days (median: 15 days, IQR: 0 days to 43 days); diagnostic delay; 57±60 days (median: 42days, IQR 14-78 days), treatment delay 19 ± 18 days (median: 15days, IQR: 11-19 days). A patient delay (> 30 days) was significantly associated with ignorance about classic symptoms of pulmonary TB, adoption of self-medication, illiteracy, and middle and lower social class. Diagnostic delay was significantly higher among those who contacted private health facilities, were unaware of signs and symptoms, had >2 consultations, and not getting an appropriate referral for TB care. Most (97%) of the study participants interviewed claimed to have incurred some expenditure.Median total expenses were 6155(IQR: 2625-15175) rupees. More than half 141 (56%) of the study participants had expenses >5000 rupees. Median transport expenses were 525(IQR: 200-1012) rupees; Median consultation expenses were 700(IQR: 200-1600) rupees; Median investigation expenses were 1000(IQR: 0-3025) rupees and the Median medicine expenses were 3350(IQR: 1300-7525).OOPE for consultation, investigation, and medicine was observed to be significantly higher among patients who ignored classical signs& symptoms of TB, repeated visits to private health facilities, and due to self-medication practices. Transport expenses and delays in seeking care at facilities were observed to have an upward trend with OOP Expenses (r =1). Conclusion: Delay in TB care due to low awareness about signs and symptoms of TB and poor seeking care, lack of proper consultation, and appropriate referrals reported by the study subjects indicate the areas which need proper attention by the program managers. Despite a centrally sponsored programme, the financial burden on TB patients is still in the unacceptable range. OOPE could be reduced as low as possible by addressing the responsible factors linked to it.

Keywords : patient pathway, delay, pulmonary tuberculosis, out of pocket expenses
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