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POSTER ABSTRACT

Economic Burden of Tuberculosis for Patients and their Households in Cochabamba, Bolivia

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Background: Patients with tuberculosis usually incur large costs directly related to their disease. Additional indirect costs also increase the economic burden of households creating barriers of access and adherence. Because TB affects the poorest segment of society the effects can be more serious for poor people. Indirect costs are poorly documented in Bolivia. We therefore conducted a study to determine the socioeconomic impact of TB on patients and their households.

Methods: A cross-sectional survey was carried out on 2017 in Cochabamba, Bolivia, included all patients who were on TB treatment within the health network. The generic survey instrument proposed by WHO for tuberculosis patients cost surveys was used. The most important direct medical and direct non-medical payments were calculated in a disaggregated manner. The calculation of indirect costs was carried out through the results-based approach where the loss of income was calculated from the report of household income. Catastrophic cost was determined and multivariable logistic regression was run to assess which factors were independently associated.

Results: The indirect costs during an entire illness episode had a median of USD 768.1 corresponding to 63.4% of the total cost for all patients. In the case of multidrug-resistant TB (MDR TB) patients, the median cost was USD 6454.8 corresponding to 54.3% of their total costs. Direct non-medical costs had a median for all patients of USD 408.7 (33.7%), and of USD 5399.6 (45.4%) for MDR TB patients. The most important non-medical costs were those linked to directly observed treatment (DOT) with a median of USD 419.8 during intensive phase and of USD 108.6 during continuation phase for transport costs. Food and drinks costs had a median of USD 94.5 during intensive phase and of USD 54.8 during continuation phase; consumption of nutritional supplements had a median cost of USD 249.1 and additional food outside the regular diet had a median cost of USD 519 for all patients. Catastrophic costs were incurred by 43.9% of TB patients. These catastrophic costs were observed in 50% of the population aged over 55 years, in 60% of MDR-TB patients, and in 63% of poor patients. Using logistic regression, factors associated with a higher risk of catastrophic costs were to live in an urban province (OR = 1.82 1.11 to 2.98, P = 0.002), to be older than 55 years (OR = 1.21 1.07 to 1.38, P = 0.005), and to have a low economic income (OR = 0.83 0.69 to 0.99, P = 0.049).

Conclusions: Patients with TB treated in health services face a great financial burden. Indirect cost was higher than direct costs in a complete TB episode, especially in MDR-TB patients. During the treatment, the most important costs were those related to transport and food when

patients went to DOT; nutritional supplements and additional food to the regular diet accounted also for a non-negligible cost. Almost half of patients suffer a catastrophic cost, especially those who came from an urban province, those who were older than 55 years, and those having a low economic income.