

**Background** In India, patients with multi-drug resistant tuberculosis (MDR-TB) are treated in hospital facilities. The WHO however also recommends home-based treatment as a viable alternative. In the action framework of the WHO 'End TB Strategy', one of the key targets set for 2035 is that there should be no TB-affected families facing catastrophic costs due to TB. Besides, removal of financial barriers to healthcare access is vital to achievement of universal health coverage. Using a cost-minimisation approach, the present study aims at providing evidence of lower cost with equal effectiveness for home-based MDR-TB care as compared to facility-based MDR-TB care, within the context of India's national health system.

**Methods** We assessed the expected costs of the two MDR-TB treatment models using a decision-analytic model with a follow-up of two years. MDR-TB treatment outcomes were obtained from a systematic review of randomised clinical trials. The outcomes of interest included treatment success, treatment failure, treatment default, and mortality, and did not vary significantly between the two alternatives. Treatment costs included the cost of: drug therapy, clinic costs, hospital admission costs, cost of injections, food, and visits to laboratory and MDR centre. Cost data of drugs, diagnosis, hospital stay and travel for both public and private care, based on a simple market survey, were taken from recently published study on MDR-TB expenditure in Chhattisgarh (Kundu *et al.*, 2015). Finally, we estimated the potential cost savings associated with home-based treatment for all patients starting MDR-TB treatment in India.

**Findings** The average expected total treatment cost for a patient in India treated for MDR-TB was estimated at US\$ 2,310 for the facility-based model and US\$ 404 for the home-based model, a potential saving of 80%. One of the major drivers of this difference is the significantly more intensive, and therefore costlier, stay charges in hospitals. As per WHO, in the year 2012, an estimated 1.6% of 73,000 patients with MDR-TB were on treatment. The potential savings associated with implementation of home-based care can be estimated at US\$ 22 million per year.

**Discussion** In early 2012 the Chhattisgarh state government included packages under RSBY (*Rastriya Swasthya Bima Yojana*) and MSBY (*Mukhyamantri Swasthya Bima Yojana*) in various national health programmes, where hospitalisation is necessary. Leveraging this opportunity, the state TB Control Programme in Chhattisgarh facilitated Revised National Tuberculosis Programme (RNTCP) partnership with RSBY and MSBY through creation of innovative MDR-TB packages under the Universal Health Insurance Scheme (UHIS), integrating it in a list of other disease packages by December 2012.

Our study provides evidence of cost savings for MDR-TB patients requiring hospitalisation for ambulatory care patients in comparison with facility-based treatment with similar outcomes. These cost savings may improve equity, however covering of indirect costs such as travel as part of the current government initiative for covering MDR-TB costs under the state health insurance schemes could mitigate the costs impact on low-income families as well.

**Conclusion** In India, treatment of MDR TB using home-based care is expected to result in similar patient outcomes at markedly reduced public health costs compared with facility-based care. Opting for home-based MDR-TB care can also enhance equity.

*No competing interest.*

OP-30 **COST-OPTIMISATION IN THE TREATMENT OF MULTI-DRUG RESISTANT TUBERCULOSIS IN INDIA**

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