

Cost of adult drug-susceptible tuberculosis treatment in South Africa's public sector

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Background

With over 180 000 tuberculosis (TB) cases reported in 2021, South Africa is one of six countries accounting for 60% of the global TB burden, and faces severe economic pressure in providing adequate treatment for those infected. To inform the National Department of Health's TB budget, we aimed to provide updated cost estimates for routine TB treatment.

Methods

To estimate the cost per episode of TB treatment, we conducted a bottom-up micro-costing of treatment for adult (≥ 18 yrs) drug-susceptible pulmonary TB. Between 2018-2021, we collected data at two primary healthcare clinics (PHCs) and two tertiary-level hospitals in Johannesburg for out- and inpatient care costs, respectively. Patient resource-utilisation was based on routine patient medical records and estimated from TB treatment initiation until an outcome was assigned. Costs were sourced from facility financial and expenditure records and included drugs, laboratory tests, staff, equipment, supplies and overheads.

Results

A total of 87 unique medical records were reviewed at the two PHCs where patients had an average treatment duration of 6 months (7.6 visits). Total cost per episode of outpatient TB treatment was R2,119 (2022 ZAR). This was driven by staff (52%) and drug (18%) costs, with laboratory tests, overheads, equipment, and supplies accounting for only a third of total outpatient costs. At the two hospitals, 86 unique records were reviewed where patients had an average stay of 6 days. Total cost per episode of inpatient treatment was R5,137, similarly driven by staff costs (36%), while supplies, equipment, and laboratory tests accounted for 50% of total costs.

Conclusions

Treating TB in hospitals, albeit for a short period, is substantially more expensive per day than outpatient care. Patients diagnosed in hospitals typically present with advanced TB disease requiring more complex treatment. Promoting earlier diagnosis may prevent disease progression, reduce hospitalisations and lower programmatic treatment costs.

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