

Shorter All-Oral Regimens for Drug-Resistant TB are Cost-Effective in India: ICMR Study

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An economic evaluation published in the *Indian Journal of Medical Research* has demonstrated that shorter, six-month all-oral treatment regimens for multidrug-resistant and rifampicin-resistant tuberculosis (MDR/RR-TB) are cost-effective and offer improved health outcomes compared to the currently used longer regimens in India.

The study was conducted by ICMR–National Institute for Research in Tuberculosis (ICMR-NIRT). It assessed the cost-effectiveness of bedaquiline-based regimens—BPaL (bedaquiline, pretomanid and linezolid) and BPaLM (with moxifloxacin)—in comparison with the existing bedaquiline-containing shorter (9–11 months) and longer (18–20 months) treatment regimens used under the National TB Elimination Programme (NTEP).

The analysis revealed that the BPaL regimen is both more effective and cost-saving. For each additional Quality Adjusted Life Year (QALY) gained, the health system spends INR 379 less per patient compared to the standard regimen, indicating better health outcomes at lower costs. The BPaLM regimen was also found to be highly cost-effective, with an additional expenditure of only INR 37 per patient per additional QALY gained compared to the standard regimen. Both regimens were associated with lower or comparable overall healthcare costs, including medicines, hospital visits, and follow-up care.

MDR/RR-TB poses significant treatment challenges due to prolonged treatment duration, adverse effects, and higher costs. Shorter all-oral regimens can improve treatment adherence, reduce patient morbidity, and enable faster return to normal life, while also lowering the burden on the health system. The findings provide important economic evidence to support the use of shorter, all-oral regimens for MDR/RR-TB management in India. By reducing treatment duration from 9–18 months or longer to six months, these regimens align with national priorities to optimise resource utilisation and accelerate progress towards TB elimination.

The study concludes that BPaL-based regimens are likely to be cost-saving or highly cost-effective and may be considered for programmatic adoption under the NTEP to strengthen India's response to drug-resistant TB. The full study can be accessed at: <https://ijmr.org.in/cost-effectiveness.pdf>

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