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# All-oral longer regimens are effective for the management of multidrug-resistant tuberculosis in high-burden settings

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**Injectable agents do not offer greater effectiveness than all-oral regimens in individuals with MDR-TB receiving a bedaquiline and/or delamanid-containing regimen. Better evidence on how to effectively manage MDR-TB in people living with HIV is required.** <https://bit.ly/3zds5d0>

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## Abstract

**Background** Recent World Health Organization guidance on drug-resistant tuberculosis treatment de-prioritised injectable agents, in use for decades, and endorsed all-oral longer regimens. However, questions remain about the role of the injectable agent, particularly in the context of regimens using new and repurposed drugs. We compared the effectiveness of an injectable-containing regimen to that of an all-oral regimen among patients with drug-resistant tuberculosis who received bedaquiline and/or delamanid as part of their multidrug regimen.

**Methods** Patients with a positive baseline culture were included. 6-month culture conversion was defined as two consecutive negative cultures collected >15 days apart. We derived predicted probabilities of culture conversion and relative risk using marginal standardisation methods.

**Results** Culture conversion was observed in 83.8% (526 out of 628) of patients receiving an all-oral regimen and 85.5% (425 out of 497) of those receiving an injectable-containing regimen. The adjusted relative risk comparing injectable-containing regimens to all-oral regimens was 0.96 (95% CI 0.88–1.04). We found very weak evidence of effect modification by HIV status: among patients living with HIV, there was a small increase in the frequency of conversion among those receiving an injectable-containing regimen, relative to an all-oral regimen, which was not apparent in HIV-negative patients.

**Conclusions** Among individuals receiving bedaquiline and/or delamanid as part of a multidrug regimen for drug-resistant tuberculosis, there was no significant difference between those who received an injectable and those who did not regarding culture conversion within 6 months. The potential contribution of

injectable agents in the treatment of drug-resistant tuberculosis among those who were HIV positive requires further study.