

IMPACT AND COST-EFFECTIVENESS OF LONG-ACTING DEPOT BUPRENORPHINE FOR THE TREATMENT OF OPIOID DEPENDENCE IN SOUTH AFRICA

Authors:

Laurence YV¹, Colman E¹, Niyomsri S¹, Mutai KK¹, Scheibe A¹⁻⁴, Hatzold K⁴, Sibiya KT⁵, Thejoane M⁵, Manyuchi A⁵, Zuma N⁵, Matsela L⁶, Coetzee L⁶, Motaung R⁶, Miot J⁶, Meyer-Rath G^{6,7,8}, Rivas V⁹, Green KE⁹, Stone J¹, Vickerman P¹, Walker JG¹

¹University of Bristol, ²TB HIV Care, ³University of Pretoria, ⁴Population Services International, ⁵Anova Health Institute, ⁶University of the Witwatersrand, ⁷Stellenbosch University, ⁸Boston University, ⁹PATH

Background:

Long-acting depot buprenorphine (LADB) for opioid agonist maintenance treatment (OAMT) offers greater flexibility and reduced dosing frequency than methadone. We evaluated the cost-effectiveness of LADB (vs. methadone) for OAMT using preliminary cost data from South Africa and outcome data from the literature.

Methods:

A micro-costing was conducted in 2025-2026 to assess the cost/person treated with LADB at community-based harm-reduction sites in South Africa. Unit costs of methadone OAMT were derived from 2025 country-level budgeting. A national dynamic model of HIV/HCV transmission among people who inject drugs in South Africa projected incremental costs and disability-adjusted life years (DALYs), HIV/HCV infections and overdose deaths averted if LADB replaced methadone for new initiates to OAMT from 2026-2050 (3% annual discount rate). The base-case assumed monthly LADB medication costs of US\$295 (based on European and Australian prices) and that LADB only affects overdose risk when starting/stopping OAMT (vs. methadone). A higher-impact scenario additionally assumed a halving in injecting risk and a 6% improvement in quality-of-life for LADB using studies from high-income settings.

Results:

Mean annual cost/person on treatment was US\$4,006 (84% medication costs) and US\$3,066 (11% medication costs) for LADB and methadone respectively. In the base-case 60 overdose deaths were averted, with little change in HIV and HCV infections. A total of 70 DALYs were averted and total incremental costs were US\$75.6 million over 2026-2050, producing an incremental cost-effectiveness ratio (ICER) of US\$1,068,957/DALY averted. In the higher-impact scenario, LADB averted 1,090 HIV and 1,260 HCV infections, 50 overdose deaths, with an ICER of US\$98,106/DALY averted. Preliminary estimates suggest that reducing the cost of LADB medications to <\$180/month would make LADB implementation cost-saving (both scenarios) vs. methadone.

Conclusion:

While delivery costs of LADB are lower than methadone, at current medication prices LADB is not cost-effective. However, at less than US\$180/month LADB would be cost-saving.

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