

Title: *Do Less Harm: Evaluating HIV Programmatic Alternatives in Response to Cutbacks in Foreign Aid*

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Abstract

Background: Resource-limited nations must consider their response to potential contractions in international support for HIV programs. Our objective was to evaluate the clinical, epidemiological, and budgetary consequences of alternative HIV program scale-back strategies in two recipient nations: the Republic of South Africa (RSA) and Côte d'Ivoire (CI).

Methods: We conducted a model-based comparison of the current standard of detection and care for HIV-infected persons (including future incident cases) to a number of scaled-back alternatives including: reduced HIV detection; No ART or delayed ($CD4 < 350/\mu l$) ART initiation; reduced investment in retention; and no viral load monitoring or 2nd-line ART. Data were obtained from published RSA- and CI-specific estimates of the HIV care continuum, ART efficacy, and HIV-related costs. We used a modified societal perspective, excluding time and productivity costs, and a time horizon of 5 and 10 years. Outcome measures included: HIV transmissions and deaths, years of life, and budgetary outlays (2015USD).

Results: At 10 years, scale-back strategies will increase projected HIV transmissions by 0.5-19.4% and deaths by 0.6-39.1%. Strategies will produce budgetary savings up to 30% but no more. Compared to the Current Standard of Care, nearly every scale-back strategy will result in proportionally greater HIV deaths (and transmissions, in RSA) than savings. When applying the least harmful and most efficient alternatives for achieving budget cuts of 10-20%, every year of life lost will save no more than \$900 in HIV-related outlays.

Conclusions: While the magnitude and details of budget cuts are not yet known – nor is the degree to which other international partners might step in to restore budget shortfalls – scaling back international aid to HIV programs is likely to have severely adverse clinical consequences. However, there are better and worse responses: for similar economic savings, certain programmatic scale-back choices will result in less harm than others.