

# Optima HIV

Optima Consortium for Decision Science, Burnet Institute, and The World Bank



*Designed to help maximize impact of the funding available for national HIV responses through allocative efficiency, as well as planning for financial sustainability.*

## Features and functions

Optima HIV is a quantitative tool that can provide practical advice to governments to assist with the allocation of current or projected budgets across the portfolio of interventions in national or sub-national HIV responses. It combines an epidemiological model of HIV transmission and disease progression integrated within a flexible economic and financial analysis. The types of questions typically addressed by Optima HIV includes:

- i. How close will the country get to their national strategic plan (NSP) targets with the current levels of funding:
  - allocated by current expenditure?
  - reallocated optimally?
- ii. How much funding is required, and/or what programmatic coverage levels are required, to meet NSP targets?
- iii. What is the optimal implementation combination of different service delivery modalities to attain these programmatic levels and at minimal cost?
- iv. What have past investments generated re. reductions in infections, morbidity and mortality?
- v. What is the expected future population impact of various policy or programme implementation scenarios?

Optima HIV has been used to support investment cases, resource allocation and target setting in over 40 countries, in both high- and lower-income settings. The Optima HIV tool is available in both a full version to allow 'deep dive', highly-customized analyses, as well as a 'lite' version. In the latter, Optima HIV users experience an easy-to-use and data-non-intensive version, building on previously conducted Optima country studies or research projects by immediately conducting and viewing new analytical results, while also viewing and changing data and assumptions as required.

## How the tool helps Country Teams

Optima HIV has several features that make it particularly relevant for country stakeholders:

- **Optimized resource allocation:** Determines the distribution of HIV investment(s) that will lead to the optimal outcomes for a particular country.
- **Added value of additional investment:** Projects the impact of different levels of investment and provides optimized distribution of funds between HIV interventions for different levels of investment.
- **Evaluation of long-term impact:** Assists in projecting medium- to long-term impacts of current investments.
- **Domestic investment case:** Can be used for advocacy to make the case for increased evidence-informed domestic financing.

## Time needs

To get the most out of an Optima HIV analysis, national monitoring and evaluation experts and other partners should run the model jointly with trained experts from the Optima Consortium and associated development partners.

Time and technical assessment (TA) needs vary:

- For countries where data collection has already been done, analyses can be conducted very quickly and with little TA (three days – two weeks).
- A new, full Optima study conducted with full engagement from country government and stakeholders, ranges in time requirements three months to a year.

## Advantages

- Serves a range of specific purposes for optimized HIV resource allocation, prioritization, evaluation and analysis of long-term financial space.
- Provides assistance to national governments in determining the optimal allocation of their HIV resources between different HIV interventions.
- Aims at bringing rigorous analysis of impact into decision-making processes.
- Suitable for facilitating disease allocations (i.e. between different diseases) when used with complimentary tools.

## Limitations

- Not a budgeting tool, but can inform optimized investment.
- The outcome of this analysis may not always be popular and considerations of equity or other political implications will need to be addressed outside of the tool.



## Data requirements

Table 1 summarizes the core data requirements for: (a) a full Optima-HIV analysis and (b) a 'lite' Optima-HIV analysis. The lite option requires substantially less data (i.e. no additional data are necessary to conduct country studies simply and quickly, but if more recent data are available then they can be used to update and improve the country model).

**Table 1. Core Optima-HIV data requirements, including 'lite' version**

Data type	Required for a full Optima-HIV analysis	Required for a 'lite' * Optima-HIV analysis
<i>Demographic data</i>		
Sub-population demographics	Yes	Prior data already uploaded
HIV prevalence by sub-population	Yes	Prior data already uploaded
Mortality rates	Yes	No
Birth rates	Desired	No
<i>Cascade data</i>		
HIV testing rates	Yes	Prior data already uploaded
Number of people receiving antiretroviral treatment	Yes	Prior data already uploaded
Time taken to be linked into care	No	No
Loss-to-follow-up rates	No	No
Viral load monitoring frequency	No	No
<i>Sexual behaviour data</i>		
Number of acts with regular, casual and commercial partners	Desired	No
Condom usage with regular, casual and commercial partners	Desired	No
Circumcision rates	Yes	No
<i>Injecting behaviour data</i>		
Number of injections	Desired	No
Needle-sharing rates	Desired	No
Number of people receiving opiate substitution therapy	No	No
<i>Programme data</i>		
Expenditure on core programmes	Desired	No
Coverage of core programmes	No	No
Planned unit costs of core programmes	Desired	No

\* While data may not be required, they will still be sourced where available, in order to improve the model's representativeness of the context (subject to time and resource constraints).