

# Assessing the Costs of “Treat All” in Namibia: Findings from Phase I

In late 2015, the World Health Organization announced new treatment guidelines recommending that anyone who has tested positive for HIV should begin antiretroviral therapy (ART) as soon as possible.<sup>1</sup> In light of this policy, the Government of Namibia included “treat all” in the 2016 National Guidelines for ART, and began nationwide implementation in April 2017.<sup>2</sup>

While the introduction of treat all will improve treatment outcomes, it also raises important questions about the potential costs associated with the introduction of this new treatment policy. Treatment costs account for nearly half (49 percent) of all HIV/AIDS resources spent in the country, including donors and international development partners. As for resources spent specifically by the Government of Namibia, 86 percent of these are currently allocated to treatment.<sup>3</sup> Adding a large number of patients to the treatment rolls may potentially require significant additional resources. At the same time, there are likely to be cost savings because of improved treatment outcomes (e.g., increased life expectancy and reduced need for second-line therapy) and fewer new HIV infections.

## METHODS

The study is estimating the change in ART-related costs by collecting cost data from selected sites retrospectively (for 12 months before the introduction of treat all) and prospectively (12 months after the introduction of treat all). Phase I (retrospective) cost data were collected from April 2016 through March 2017 at 10 facilities—6 hospitals and 4 health centers. Four of the sites were in Kavango region, 4 in Oshikoto, and 2 in Omusati (all sites were located in the north of the country, where approximately 60 percent of Namibia’s population resides). The same 10 sites will be revisited in Phase II, starting in June 2018.

Quantitative data were collected to estimate the change in ART-related costs, including the costs

of consumables (including antiretrovirals [ARVs]), personnel, training, transport, laboratory, capital, maintenance and utility, and management and supervision. The same cost data will be collected at the same 10 sites in Phase II, which will occur after the introduction of treat all in Namibia.

The process of collecting cost data began by interviewing program managers at each of the 10 sites. Direct personnel costs were collected by identifying all staff members who treat patients living with HIV. These staff were then asked to identify the proportion of their time spent on the treatment of patients with HIV. Salary for individual staff members was generally not accessible at the sites. It was therefore necessary to identify the government classification of staff members (e.g., enrolled nurse, registered nurse, chief medical officer), and then to obtain the salary rates for these staff from either the Government of Namibia or IntraHealth (one of the implementing partners providing treatment services at the 10 facilities).

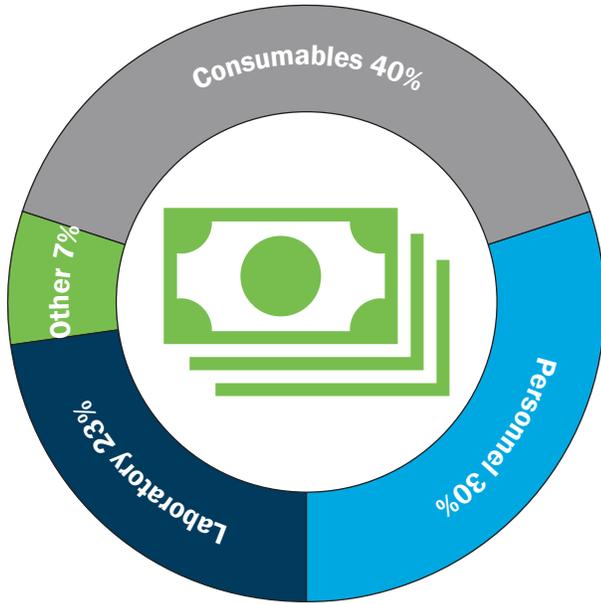
## RESULTS

The average unit cost per client per year was US\$431. These costs ranged from as low as US\$345 to as high as US\$595 per patient per year, depending on the facility. Comparing treatment cost data collected by Clinton Health Access Initiative from other countries on the continent, Namibia’s treatment costs appear to be higher than in Malawi (US\$136 per year), Ethiopia (US\$186 per year), Rwanda (US\$232 per year) or Zambia (US\$278 per year) but were lower than those in South Africa (US\$682 per year).

As shown in Figure 1 (next page), the largest cost drivers were consumables, most of which were ARVs. This was followed by personnel and laboratory costs.



**Figure 1 Average unit cost distribution**



The average unit cost per client was comparable at health centers and hospitals. The unit cost at health centers and clinics was US\$437, whereas it was US\$427 at hospitals ( $p = 0.85$ ).

Differences in unit cost by region were also relatively minor, with the average unit cost varying from as high as US\$465 in Kavango, to US\$394 in Omusati and US\$415 in Oshikoto ( $p=0.54$ ).

Analyzing the unit costs per site by the number of ART patients seen at each site did indicate some economies of scale, with larger volume sites having lower unit costs than smaller volume sites. However, only 16 percent of all unit cost variation was explained by the number of patients seen at each site.

## CONCLUSIONS AND NEXT STEPS

The average annual cost of treating a patient in Namibia prior to the introduction of test all was US\$431. This was largely driven by the cost of consumables (US\$172 per patient per year, including ARVs), followed by direct and indirect personnel

(US\$131 per patient per year), laboratory procedures (\$98 per patient per year), and other (US\$31 per patient per year).

There was some variation in unit costs for the 10 facilities (ranging from US\$345 per patient per year to US\$595 per patient per year). However, there was no statistical variation in unit costs between hospitals and health centers/clinics or by region.

There was an indication that economies of scale exist, with higher volume sites having a lower unit cost. However, economies of scale explained only 16 percent of all variation in unit costs.

Phase II should provide a clearer indication about how unit costs vary with the introduction of treat all, as well as other factors that might potentially affect treatment costs. By returning to the same 10 facilities and collecting comparable data, it should be possible to determine if costs are changing. By merging this with data on clinical results (e.g., viral suppression, mortality), it will be possible to assess both the costs and the benefits of treat all.

## REFERENCES

1. World Health Organization (WHO). 2015. Guideline on When To Start Antiretroviral Therapy and on Pre-Exposure Prophylaxis for HIV. Geneva: WHO. Available from: [who.int/hiv/pub/guidelines/earlyrelease-arv/en/](http://who.int/hiv/pub/guidelines/earlyrelease-arv/en/)
2. Namibia Ministry of Health and Social Services. 2016. National Guidelines for Antiretroviral Therapy. Windhoek, Namibia: Government of Namibia.
3. Namibia Ministry of Health and Social Services. 2017. Namibia 2014/15 Health Accounts Report. Windhoek, Namibia: Government of Namibia.

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