

# **ZIMBABWE: Building a Strong System for HIV Costing**

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## Acronyms

AGYW	Adolescent girls and young women
AIDS	Acquired Immunodeficiency Syndrome
ART	Antiretroviral therapy
CCM	Country Coordinating Mechanism
COP	PEPFAR's Country Operational Plan
CSO	Civil society organisation
DAAC	District AIDS Action Committee
DFID	United Kingdom's Department for International Development
DIP	Detailed Implementation Plan
GFATM (FR)	The Global Fund to fight AIDS, Tuberculosis and Malaria (Funding Request)
GoZ	Government of Zimbabwe
HCW	Healthcare worker
HIV	Human Immunodeficiency Virus
HRH	Human Resources for Health
HSS	Health Systems Strengthening
HSSP	Health Sector Strategic Plan
HTS	HIV Testing Services
IC 2.0	HIV Investment Case 2.0
ICAP	Columbia University Mailman School of Public Health HIV Initiative
KP	Key Populations
MODO	Ministry of Health and Development Organisations
MoHCC	Ministry of Health and Child Care
MSM	Men who have sex with men
NAC	National AIDS Council
NASA	National AIDS Spending Assessment
NATF	National AIDS Trust Fund
NHA	National Health Accounts
NMERAG	National Monitoring and Evaluation Research Advisory Group
NSP	National Strategic Plan
PAAC	Provincial AIDS Action Committee
PEPFAR	President's Emergency Plan for AIDS Relief
PLHIV	People living with HIV
RNM	Resource Needs Model
RM	Resource Mapping
TA	Technical Assistance
TWG	Technical Working Group
UNAIDS	Joint United Nations Program on HIV and AIDS
USD	United States Dollar
VMMC	Voluntary Medical Male Circumcision
ZNASP	Zimbabwe National AIDS Strategic Plan

## Chapter 1: Rationale for the Case Study

### 1.1. Rationale and objectives of case study

Zimbabwe continues to face a high and costly HIV burden, with 1.4 million Zimbabweans living with HIV. In 2019, the total budget for the HIV response was \$338 million USD, including \$61.6 million USD financed by the Government of Zimbabwe (GoZ)<sup>1</sup>. This represents 1.7% of GDP, one of the highest shares of national income directed at fighting AIDS of any country in the world. Zimbabwe faces an extremely constrained fiscal space for health, and expects additional stressors due to the global Covid-19 pandemic. Efforts to increase efficient use of available HIV funds will become even more critical in this environment to maximize resource absorption and impact and achieve GoZ targets.

One of the most consequential inputs to strategic planning initiatives is resource needs estimation, also known as “costing.” In principle, a costing exercise is the process of estimating the value of resources in a given intervention or process. Robust and high-quality costing saves time and money by ensuring that resources are efficiently deployed to execute national strategies and dedicated to the most life-saving interventions. Cost estimates for HIV interventions inform prioritization initiatives (including those based on cost-effectiveness calculations, budgeting, and funding requests.<sup>2</sup> Equity evaluation, fairness and distributive justice, and service delivery also draw from information on costs of services.

Currently, the main HIV costing exercises accompanying major strategic initiatives by the GoZ and partner organizations are the Zimbabwe National AIDS Strategic Plan (ZNASP), the Investment Case, and funding requests to the Global Fund (GFATM). While many advances have occurred over the past decade in the use of costing in Zimbabwe’s HIV strategy development, stakeholders acknowledge there is more that can be done to address persistent weakness, such as low program-wide synchronization and data sharing, and limited efforts at institutionalization.

This Case Study was developed as part of a wider multi-country HIV costing project for Eastern and Southern Africa, led by the Harvard T.H. Chan School of Public Health. The overall project aims to assess the quality, coherence, and strength of HIV costing across countries, how costing approaches have evolved over time, and what can be done to support countries to expand their national capacity and systems for HIV and related health sector costing.

Pharos Global Health Advisors was engaged to conduct an analysis of the costing system underlying Zimbabwe’s national AIDS programs and to propose actions to enhance its effectiveness and sustainability.

The Zimbabwe study had three specific objectives:

1. To retrospectively review capacity, existing tools, data, and processes in place for the estimation of resource needs for HIV programming in Zimbabwe for the period of 2017-2020.

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<sup>1</sup> PEPFAR COP 2019 page 14. Accessed: [https://www.state.gov/wp-content/uploads/2019/09/Zimbabwe\\_COP19-Strategic-Directional-Summary\\_public.pdf](https://www.state.gov/wp-content/uploads/2019/09/Zimbabwe_COP19-Strategic-Directional-Summary_public.pdf)

<sup>2</sup> Beck EJ, Santas X, DeLay P (2008). Why and how to monitor the cost and evaluate the cost-effectiveness of HIV services in countries. *AIDS*, 22(Suppl 1):S75–S85.

2. To document the experience in costing Zimbabwe's National AIDS Strategic Plan IV (ZNASP IV), GFATM Funding Request (GFATM FR), and Investment Case 2.0 (IC 2.0), and produce a case study of lessons learnt.
3. To make recommendations for strengthening the capacity and coordination of Zimbabwe's institutions involved in HIV costing, that can enhance the quality and timeliness of future costing activities.

The study team reviewed documentation of the national costing process, interviewed key stakeholders such as UNAIDS and the Ministry of Health and Child Care (MoHCC), assessed more than a dozen important HIV strategy documents, and identified best practices.

### *1.1.2 Framework for assessing the national HIV costing system*

In undertaking this study, the Pharos team adopted an analytical framework which views HIV costing as a "system" that combines three kinds of inputs -- data and tools, knowledge and skills, and processes -- to create outputs that then ideally have an impact on policy, program, and spending decisions in national HIV programs. See figure 1.

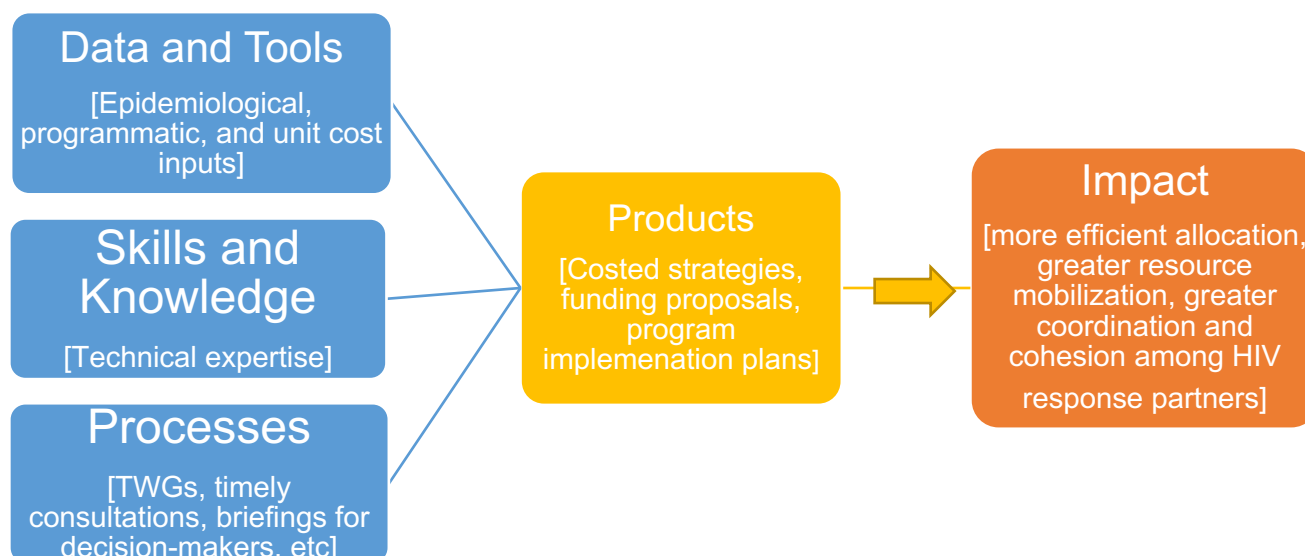
*Data and tools* include, for example, information on unit costs and expected program coverage and models such as Spectrum's Goals/RNM and Optima that estimate the cost and projected impact of investments in scaled up HIV prevention and treatment services.

*Skills and knowledge* relate the technical expertise of the consultants, government staff, or other individuals tasked with completing costing exercises and computing cost estimates. These individuals may have training in economics, financing, business, and accounting, and experience in designing, costing, managing, and monitoring HIV and other disease control programs. Some will be nationals and others will be expatriates. Some will work for domestic institutions and others for international agencies.

*Processes* refers to the key activities, timelines, consultations, and linkages between costed HIV strategies and actual policy and expenditures decisions. When HIV costing studies are widely disseminated and vetted by stakeholders, this can improve their visibility and credibility. When they are discussed thoroughly with major decision makers – health and finance officials, donor funding representatives, and managers of implementing agencies – and delivered to these decision-makers before budgets are made and finalized, HIV costing can have substantial impact. When such processes are not well designed and executed, costing studies are likely to have much less impact.

These three kinds of inputs thus shape the quality of the costing end-product and ultimately the extent to which costing will impact the HIV program decision-making. For instance, the Global Fund Funding Request (GFATM FR) is costed using epidemiological, program coverage, and unit cost data and the skills of a Technical Working Group (TWG) headed by local costing consultants, as part of a large team that prepares the FR using a consultative process between the GoZ and the GFATM. The FR, including its overall estimate of funding required to fight AIDS over a five-year period and the gaps between needed financing and what is likely available from other sources (Government, PEPFAR, etc), contains a proposed budget for the three-year Global Fund grant that is meant to help fill the gap and generate gains in reducing HIV infections and saving lives. A strong costing in the FR thus helps to explain and justify the utilization of Zimbabwe's GFATM three-year grant allocation.

Figure 1: Analytical Framework for HIV Costing



This analytical framework is employed in the case study below. The impact and assessed quality of the main costing products of the past five years are examined and related to the data and tools, skills and knowledge, and processes that were used to create those products. In this way, the strengths and weaknesses of the three group of inputs can be highlighted and proposals advanced so that HIV costing in Zimbabwe is further enhanced.

To understand how the different inputs of the HIV costing system affect the quality and impact of costing, we start this report with an assessment of the impact and quality of the costing exercise “products” themselves, then work backwards to evaluate strengths and weaknesses of the components that make up the costing system. Ultimately, the recommendations put forth at the end of the case study target potential improvements to the three components of Zimbabwe’s costing system.

## 1.2 Methods

### 1.2.1. Review of key documents

We reviewed recent costing exercises to assess the types of HIV costing undertaken in Zimbabwe and assess the quality of costs produced. Included in this review were documents describing cost estimation of Zimbabwean HIV interventions, and costing analyses for the purposes of resource needs estimation, operational modelling, or budgeting. Documents were identified based on suggestions from key informant interviews, review of document bibliographies, and expert recommendation. Documents beyond the past five years were excluded. All documents were either approved by the Government of Zimbabwe and/or were published in peer-reviewed journals.

In total, 13 documents were identified for review. These documents included:

- Zimbabwe Health Sector HIV and STI Strategy 2021-2025
- HIV Testing Services Strategy 2017-2020

- Analyzing Fiscal Space Options for Health in Zimbabwe
- Phase 2 Report: Improving the Allocative Efficiency of the HIV Response Across the Care Cascade in Zimbabwe
- Improving Allocative Efficiency in Zimbabwe's Health Sector: Results from the Health Interventions Prioritization Tool
- National Results Based Financing Programme: Programme Implementation Manual
- Zimbabwe National HIV and AIDS Strategic Plan 2021-2025: Towards ending AIDS as a public health threat (Draft)
- The Plan for Elimination of Mother to Child Transmission of HIV & Syphilis in Zimbabwe 2018-2022
- Sustainability Transition Implementation Plan: Voluntary Medical Male Circumcision
- Implementation Plan for HIV Pre-Exposure Prophylaxis in Zimbabwe
- Funding Request to the Global Fund 2020-2022
- MoHCC Health Sector Resource Mapping Report, 2018-2019
- New Zimbabwe HIV Investment Case 2.0 (IC 2.0) (draft)

To assess the quality of these documents, an instrument was developed and applied (see Annex 1). It generated descriptive information about the document, an overview of the costing process and tools used, and a scoring system to assess quality. The rubric for the quality assessment was adapted from the Global Health Cost Consortium (GHCC) checklist, which reflects the principles laid out in the GHCC reference case.<sup>3</sup> The two main evaluation areas were 1) How robust was the study design and purpose? (7 points) And 2) What was the quality of the costing methodology and data sources? (16 points if a primary costing study document and 13 points if not a primary data collection study). The tool also allowed team members to express their impressions of the costing document. Each document was reviewed by at least two members of the Pharos team. Discrepancies in scoring were discussed by team members to arrive at a consensus score. To comprehensively apply this tool, the study team obtained the underlying calculations and assumptions behind cost estimations. Both overall and sub-category scores were compared across documents to determine strengths and weaknesses.

### *1.2.2. Key informant interviews*

Key informant interviews were conducted to collect qualitative data about costing processes, capacity, technical quality, and institutionalization. Key informants were also asked to provide recommendations for strengthening the quality, human resources capacity, and institutionalization of HIV costing activities.

Three categories of informants were interviewed: 1) Government of Zimbabwe (Ministry of Health and Child Care, National AIDS Council, and related government institutions); 2) Development Partners (PEPFAR, UNAIDS and other UN Agencies, Global Fund, World Bank, CHAI); 3) Research and Academia (e.g. University of Zimbabwe Research Centre). Additional

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<sup>3</sup> [https://ghcosting.org/pages/standards/appendices/principles\\_and\\_methods\\_reporting\\_checklist](https://ghcosting.org/pages/standards/appendices/principles_and_methods_reporting_checklist)



key informants were added to the list based on recommendations during interviews. This list can be found in Annex II.

A letter was drafted and distributed to the key informants inviting their participation. Key informants were invited to participate in a one-hour interview, joined by at least 2 team members. All interviews were conducted via Zoom. Interviews were not recorded, but transcript-style notes were taken. A semi-structured interview guide was developed and can be found in Annex III. In many cases, the interview went beyond the scope of the interview guide based on the expertise and experience of the interviewees.

A matrix was created summarizing key points from each interview. Main takeaways were reported back to interviewees to verify they were properly interpreted.

### *1.2.3 Consultation and buy-in*

After the case study was drafted, the Pharos team presented the document and requested feedback from key informants via email communication and follow-up interviews. The team also organized a Zoom meeting to present its main findings and recommendations to the main stakeholders and obtain their feedback and validation.

## **Chapter 2: Setting the Stage**

### **2.1 Epidemiological burden of HIV in Zimbabwe**

There are 1.4 million people living with HIV (PLHIV) in Zimbabwe, corresponding to a prevalence of 12.8% among all adults 15-49 years<sup>4</sup> in 2019. There has been a 39% decline in overall annual new infections since 2010 (from 62,000 to 38,000 in 2018<sup>5</sup>), but the country is not yet on track to reach its target of fewer than 12,600 new infections in 2025. Since 2010, Zimbabwe has had a 50% reduction in AIDS-related deaths<sup>6</sup> with 21,800 deaths in 2018.<sup>7</sup>

The prevalence among women is higher than men at 15.4% and 10.1%, respectively<sup>8</sup>. The gender disparity is greatest among young people age 20-24 years, with young women facing a disease burden three times that of their male peers (8.1% vs. 2.7%)<sup>9</sup>. HIV prevalence in Zimbabwe increases by age, with the highest prevalence among males 50-54 years at 28.1% and females aged 35-49 years at 29.5%. Prevalence is lowest among children at 1.6% with 84,295 children under the age of 14 living with HIV<sup>10,11</sup>.

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<sup>4</sup> UNAIDS AIDSInfo, 2018 data, Online at <http://aidsinfo.unaids.org/>

<sup>5</sup> UNAIDS AIDSInfo, 2018 data. Online at <https://www.unaids.org/en/regionscountries/countries/zimbabwe>

<sup>6</sup> Zimbabwe Health Sector HIV and STI Strategy 2021-2025.

<sup>7</sup> Zimbabwe National HIV and AIDS Strategic Plan 2021-2025 [DRAFT]

<sup>8</sup> UNAIDS AIDSInfo, 2018 data, Online at <http://aidsinfo.unaids.org/>

<sup>9</sup> Zimbabwe Population-based HIV Impact Assessment (ZIMPHIA) 2019. Page 45. Online at <http://bit.ly/2PoyNB4>

<sup>10</sup> 2019 Estimates, released on 19 March 2020. Not yet online, but should reflect soon on UNAIDS AIDSInfo Online at <http://aidsinfo.unaids.org/>

<sup>11</sup> Zimbabwe Population-based HIV Impact Assessment (ZIMPHIA) 2019. Page 45. Online at <http://bit.ly/2PoyNB4>

Zimbabwe has both a generalized HIV epidemic and sub-epidemics among key populations (KPs) at the district level. Populations most affected are namely adolescent girls and young women (AGYW), sex workers, transgender people, men who have sex with men (MSM), people who use drugs, and prisoners. The highest incidence is among AGYW, at 6.68 per 1000 population<sup>12</sup>.

HIV prevalence varies by geographic location, with south-eastern provinces Matabeleland South (21.7%), Matabeleland North (19.5%), and Bulawayo (17.9%) facing the highest disease burdens<sup>13</sup>. At the district level, prevalence ranges from 5.7% to 23.1%, and is highest in the southeast. According to Zimbabwe's 2019 geospatial mapping analysis, 95% of geographic variation can be explained by early age of sexual debut, low condom usage, low coverage of male circumcision, and multiple partnerships<sup>14</sup>.

## 2.2 National HIV program

Over the last 20 years, Zimbabwe has made considerable progress towards the UNAIDS 95-95-95 targets. In 2019, 91% of adults living with HIV knew their status, 93% of whom were on anti-retroviral therapy (ART), and 86% of those on ART were virally suppressed<sup>15</sup>. Nonetheless, significant gender- and age-related disparities persist in access to care and stigma remains a deterrent against testing and treatment for HIV, especially for adolescent girls and young women (AGYW) and adult men. Adult males are also less likely to have suppressed viral loads than female peers. Unfortunately, the treatment cascade among children is only 57%-57%-52%<sup>16</sup>, well below the 95-95-95 targets.

The National AIDS Coordination Programme was established by the government in 1987 to lead the national HIV response. In order to demonstrate commitment by the government to the HIV epidemic response, a multisectoral National AIDS Council (NAC) was established in 2000 including representation from the government, private sector, nongovernmental organizations, churches and people living with HIV/AIDS. NAC's mandate was to coordinate the multi-sectoral response beyond the Ministry of Health and Child Care (MoHCC).

The NAC is in charge of guiding the National HIV Policy and mobilizing resources through the National AIDS Trust Fund (NATF). The NATF was established in 2000 to mobilize domestic funding for HIV, and consists primarily of the AIDS Levy and Health Levy, which are taxes on income (3%) and mobile phone airtime (5%) respectively. The NAC oversees provincial- and district-level AIDS Action committees, as well as the national KP programme for vulnerable populations led by civil society organisations (CSOs) and the Private Sector Coordination Board. The NAC leads the development of a multi-sectoral strategy, the Zimbabwe's National HIV and AIDS Strategic Plan for 2021-2025 (ZNASP IV). The ZNASP IV aims to reduce new HIV infections to 12,600 by 2025 and HIV deaths to 10,800.<sup>17</sup> The ZNASP IV also places a new emphasis on investing in social enablers, community systems, monitoring & evaluation, and key

<sup>12</sup> UNAIDS AIDSInfo, 2019 data, Online at <http://aidsinfo.unaids.org/>

<sup>13</sup> Zimbabwe Population-based HIV Impact Assessment (ZIMPHIA) 2019. Page 46. Online at <http://bit.ly/2PoyNB4>

<sup>14</sup> Report on Geospatial Modelling of HIV Epidemic in Zimbabwe 2019. Pages 19 & 24. Online at <http://bit.ly/3a8XqQR>

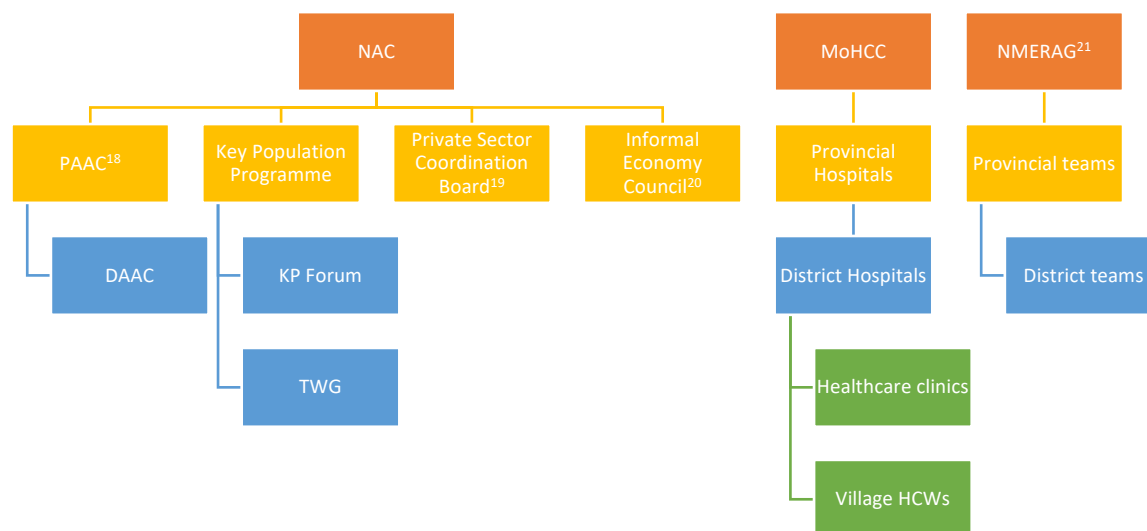
<sup>15</sup> COP 2020 Outbrief Zimbabwe. Slide 13 Online at <http://bit.ly/2lwYySI>

<sup>16</sup> Zimbabwe HIV Epidemiologic Review 2019. Page 38. Online at <http://bit.ly/2vfwlHI>

<sup>17</sup> Zimbabwe National HIV and AIDS Strategic Plan 2021-2025 [DRAFT]

population interventions will require additional resources. However, sustainability of current HIV prevention efforts is already threatened due to dependence on donor funding.

Figure 2: Organizational Structure of Zimbabwe National AIDS Response<sup>18192021</sup>



The Ministry of Health and Child Care (MoHCC) leads the implementation of key biomedical HIV interventions, and in doing so oversees a hierarchy of provincial- and district-level hospitals. The Ministry of Health’s guiding document is the Zimbabwe’s National Health Sector HIV and STI Strategy. The most recent edition 2021-2025 sets goals to reduce HIV incidence by 50% by 2025, to reduce AIDS-related deaths by 60% from 21,800 in 2018 to less than 10,000 in 2025, and significantly reduce HIV and AIDS-related stigma by 2025<sup>22</sup>. The strategy focuses on “micro-targeting” using granular data to focus the HIV response where it is most needed at the local level, social contracting with civil society organizations (CSOs), engaging key populations from existing sites, and decentralizing HRH by task-shifting to nurses and community health workers (CHWs).

### 2.3 HIV financing

The total 2019 budget for HIV control in Zimbabwe was \$338 million USD, of which 43% came from PEPFAR (\$145 million), 37% from the GFATM (\$123 million), 18% from the GoZ (\$61 million), and 2% from other external sources (\$8 million)<sup>23</sup>.

<sup>18</sup> PAACs & DAAC meetings are considered of low-quality, and the agenda is unclear. According to the GFATM FR, there is poor decentralization.

<sup>19</sup> The Private Sector Coordination Board has operational difficulties because there is no funding.

<sup>20</sup> Informal Economy Council does not have a direct relationship with informal sector businesses given that members are informal sector associations. Their strategic plan has not been implemented due to inadequate funding.

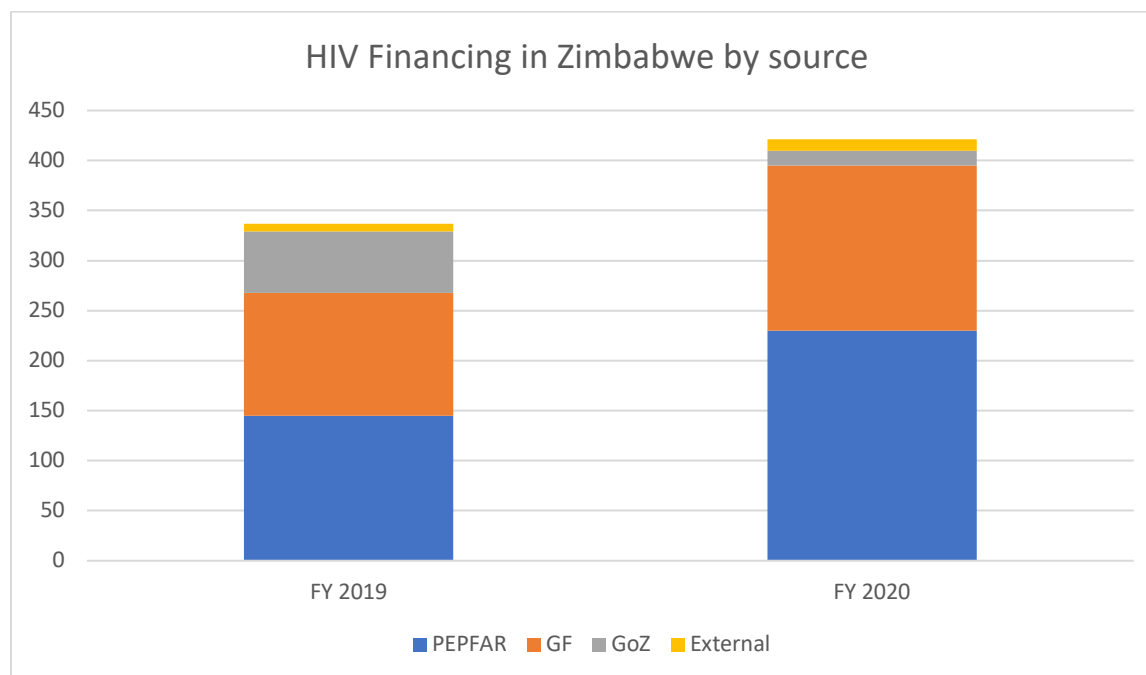
<sup>21</sup> National Monitoring & Evaluation Research Advisory Group

<sup>22</sup> Zimbabwe Health Sector HIV and STI Strategy 2021-2025.

<sup>23</sup> PEPFAR COP 2019

The bulk of HIV financing is earmarked for clinical treatment (ART) for PLHIV. For FY 2019, 60% of the budget (\$203 million USD) was committed to clinical treatment, followed by prevention (16% at \$55 million), and Health Systems Strengthening (HSS) (12% at \$40 million)<sup>24</sup>. PEPFAR and the Global Fund together contribute 80% of the ART budget, while most of the remaining 20% is funded by GoZ.

Figure 3: HIV Financing in Zimbabwe by Funder, sources PEPFAR COP 2019 and GFATM FR 2020



PEPFAR is particularly focused on prevention initiatives, funding 93% of VMMC (\$31.2 million USD) and 85% of prevention efforts targeting AGYW (\$14.8 million USD)<sup>25</sup>. Voluntary Male Medical Circumcision (VMMC) and condom procurement are largely externally funded.

Zimbabwe's domestic financing of the HIV response is under strain due to an unstable economic environment characterized by high debt burden, estimated at \$9.3 billion USD in 2016<sup>26</sup>, and hyperinflation of 320%<sup>27</sup> following the adoption of a new local currency, the RTGS dollar, in February 2019. During the previous GFATM allocation (2017-2019), Zimbabwe exceeded the GFATM co-financing requirement via an \$87 million USD NATF commitment. However, due to hyperinflation, the Global Fund waived the co-financing requirement for Zimbabwe's 2020-2022 funding request, which illustrates how dire the current domestic resource mobilisation constraints are. To address inflation, the National AIDS Council (NAC) and UNDP (which is the principal recipient of the GFATM grant) swap currency, yielding \$10 million USD for government use in controlling HIV.

<sup>24</sup> PEPFAR COP 2019

<sup>25</sup> PEPFAR Country Operational Plan for Zimbabwe 2019. Online at [https://www.state.gov/wp-content/uploads/2019/09/Zimbabwe\\_COP19-Strategic-Directional-Summary\\_public.pdf](https://www.state.gov/wp-content/uploads/2019/09/Zimbabwe_COP19-Strategic-Directional-Summary_public.pdf)

<sup>26</sup> International Monetary Fund, June 2017. Online at <https://www.imf.org/external/pubs/ft/dsa/pdf/2017/dsacr17196.pdf>

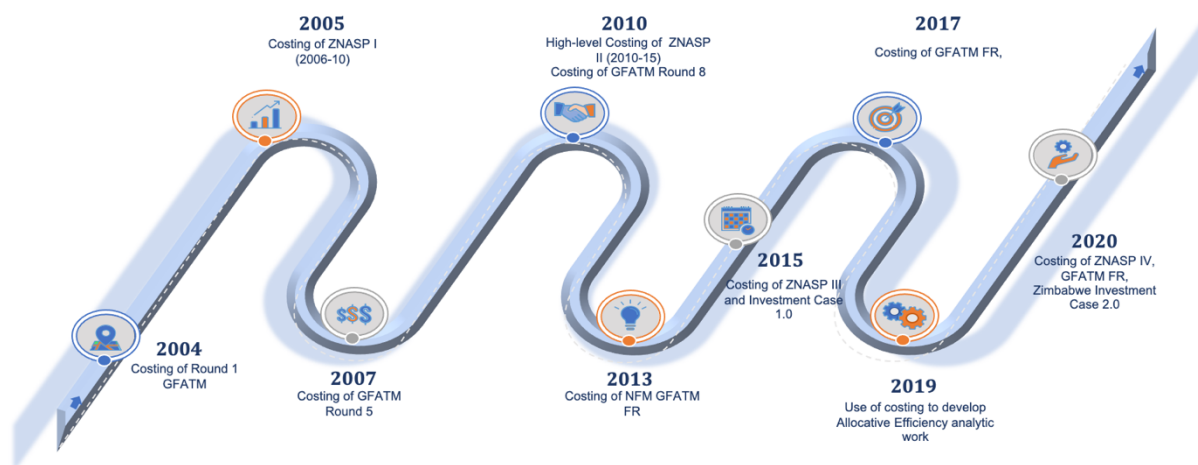
<sup>27</sup> International Monetary Fund, April 2020. Online at <https://www.imf.org/en/Countries/ZWE>

Accurate costing of national HIV strategies is key for Zimbabwe to invest its resources in the most efficient and life-saving interventions. Nearly 12% of the current adult population is living with HIV, and the financial strain of HIV programming represents almost 2% of GDP. HIV activities represent a large share of domestic health expenditure, and costed national plans allow policymakers to better mobilize resources for future spending.

#### 2.4 Brief History of HIV costing in Zimbabwe

HIV costing has evolved over the last 16 years, as illustrated by Figure 4. The first costed HIV strategy was the Global Fund Round 1 Funding Request in 2004, which led to the first costed National Strategic Plan, or the ZNASP I in 2005, covering the resource needs period of 2006-2010. The ZNASPs are costed on four-year intervals; ZNASP II was costed in 2010, ZNASP III in 2015, and ZNASP IV in 2020. The Global Fund allocations are on three-year cycles, and Zimbabwe has submitted costed applications in 2007, 2010, 2013, 2017, and 2020. The first HIV Investment Case was costed in 2015, coinciding with the ZNASP III, and a second one is under development at present. In recent years a wide range of components of the national HIV response have been planned and costed, including the overall health sector part of the HIV program and areas such as STI treatment, prevention of mother to child transmission, voluntary male circumcision, and pre-exposure prophylaxis. Other studies such as a World Bank sponsored report on optimizing AIDS treatment have also used costing to derive a part of the efficiency analysis.

Figure 4: Evolution of HIV costing in Zimbabwe



#### 2.5 Roles of HIV costing in Zimbabwe

The use of cost information can be summarised in three broad categories:

- **Strategic and Operational Plans** – In Zimbabwe planning and target setting is no longer done 'blindly' without an appreciation of the resource implications. Costing has brought about a significant change in how targets are set. Before, ambitious targets were set and agreed upon during the strategy development, but now a sense of the feasible resource envelope leads to more realistic target setting exercises. In writing the ZNASP, a review of the previous NSP expenditure (including through National AIDS Spending

Assessments) has been used to estimate the potential future funding availability to inform realistic target setting going forward. In addition, allocative efficiency analysis (which requires detailed cost estimation) is being used to shape discussions of target setting. On the basis of unit costs and potential resources, budget optimisation is being done to influence the selection of strategies in the latest ZNASP.

HIV costing plays an important role every five for the NSP, and every ten years for the overall National Health Strategic Plan. The HIV Investment Case is an important input to these plans, as it helps to set an aggregate total cost for the strategic period and to highlight options and trade-offs that can maximize impact for various amounts of likely expected funding. Allocative and technical efficiency analysis built upon accurate costing is a vital part of the modelled scenarios that shows the options and trade-offs.

Key examples: National Health Sector Strategic Plan, National HIV Strategic Plans (ZNASPs), HIV Investment Case

- **Work plans and implementation budgets** – Annual work plans help to determine resource allocation, prioritisation, and budgeting exercises. The MoHCC leads Ministry of Health and Development Organizations (MODO) retreats to review progress and planning for subsequent planning periods. Costing is a key input in assessing how resources have been previously allocated, future priorities, and financial gaps. The retreats are usually attended by government HIV programme staff, implementing partners, and various stakeholders including funding agencies.

To accompany their work plans, managers require information on costs of HIV services in order to structure their daily, monthly and annual programme implementation budgets and financial expenditure reporting. Costed activities are submitted to the funder for payment, which is usually drawn from a detailed budget governing the programme. For example, the finance officer in the AIDS/TB unit derives costs from the Global Fund-approved Detailed Implementation Plan (DIP).

Key examples: National HIV Programme Operational Plan, Vertical Programme Implementation budgets, Detailed Implementation Plan

- **Resource mobilisation** – Costing exercises are used to create budgets for external resource mobilization through processes such as GFATM Funding requests, PEPFAR Country Operational Plans, etc. These take place systematically in a structured manner (e.g. every three years for Global Fund request, annually for PEPFAR COPs). There may also be ad hoc opportunities for resource mobilisation from other outside funders or e.g., from special Covid-19 funding pools.

Key examples: GFATM Funding Requests, PEPFAR COPs, HIV Investment Case

## Chapter 3: Assessing the impact of current HIV costing activities

### 3.1 Overall impact

The ultimate goal of costing exercises is to exert impact on policy and decision-making. Stakeholders invest in data inputs, skills, and processes to produce high quality costing products that will be respected and utilized by government officials, international partners, and program managers. To achieve this, a number of elements need to come together. The costing needs to be technically sound. It needs to be completed in a timely way so that it arrives “just in time” to make budgeting decisions. It must be owned by the decision makers, ideally because they have been involved in the costing work and are familiar and confident about the quality and accuracy of the results. Costing is considered impactful if it informs target-setting, leads to changes in allocations for interventions, shapes price negotiations, or successfully mobilises resources.

Overall, stakeholders reported that there are strong linkages between recent HIV cost estimates and strategic decision making in Zimbabwe. Interviewees described costing work as a key consideration in programmatic and financial decision-making during high-level HIV meetings. In particular, stakeholders suggested that the costing informed target setting for specific interventions and was used to justify budget requests for the HIV program. Key informant perceptions on the impact of the three main HIV costing documents and sample vertical costing documents are outlined below.

### 3.2 Impact of GFATM Funding Request costing

#### Impact assessment: Very High

Stakeholders reported that the Funding Request costing was highly respected and influential in informing policy and program decisions. Stakeholders were complimentary of the Global Fund costing and described many examples of how it was actively used to shape the Funding Request scope and objectives. Some direct results of the Funding Request costing include:

- A comprehensive detailed costing exercise of the priorities for HIV/TB joint application.
- Successful application for funding amounting \$472m (2021-23).
- Rationalisation of several activities such as communication strategies, harmonisation of unit costs for TA, HR, support and supervision
- Basis for other resource mobilisation activities such as PEPFAR CoP, World Bank etc.
- Decisions on disease splits based on a clear understanding of the costs for targeting existing gaps within each programme.

### 3.3 Impact of ZNASP IV costing

Stakeholders also reported favourable views towards the ZNASP IV costing and its use as a foundation for future costing exercises. However, stakeholders recalled fewer examples of the ZNASP IV costing’s influence on defining specific strategic targets and objectives. While the ZNASP costing led to introduction of new tenofovir regimes, in general it was viewed as a catalyst for wider conversations about budget constraints and optimization of resources.

#### Impact assessment: High

Some direct results of the ZNASP IV costing include:

- A realistic approach to target setting.
- Budget impact analysis, through development of scenarios for varying resource scenarios.
- Adoption of implementation and allocative efficiency through ensuring more community driven cost-effective interventions.
- A clear set of unit costs that can be adopted going into the future.

Observations about the ZNASP IV were:

- Scenarios were developed based on a) global aspirations; b) current progress in coverage and c) realistic budget. Resource needs were estimated for all scenarios. Costing was then used to propose a scenario for adoption given an understanding of the potential resources and informed the strategies to be adopted going forward. However, one stakeholder noted that the macro-level costing of the ZNASP is too high-level for many specific implementation programmes to re-apply the cost estimates.

### 3.4 Impact of IC 2.0 costing

Stakeholders were again generally positive in speaking of the IC 2.0, but comments on the influence of the IC 2.0 on policy and programming were vague. The IC 2.0 was reported to provide useful inputs and analysis, but no specific examples were given for how the IC changed policy. It may still be too early to judge this, as the IC 2.0 is just being completed in mid/late 2020.

#### **Impact assessment: Medium**

Some direct results of the IC 2.0 costing include:

- A clear understanding on how to structure investments over a 10-year time horizon.
- Appraisal of various approaches to investments.
- Understanding of potential savings associated with varying decisions on investment approaches.

### 3.5 Impact of vertical costing strategies

In addition to the three main costing strategies, key informants offered perceptions on the impact of **allocative efficiency studies and vertical program costings**. Key informants brought up three documents in particular, the Allocative Efficiency Study by the World Bank and the HTS and VMMC strategies authored by CHAI. Costing led by CHAI proved that ART was affordable for Zimbabwe by providing data on what was driving the cost of HIV programs, leading to enhanced ART provision for PLHIV. **The results of the Allocative Efficiency study informed the selection of an optimal mix of ART delivery in Zimbabwe**, and stakeholders reported that the detailed unit costs developed from the bottom-up were useful for other exercises. The VMMC and HTS costing exercises also led decisions on optimized programming within a constrained resource environment.



## Chapter 4: Assessing the quality of HIV costing products

Costing analysis products are typically summary documents but may also include original excel calculations. These are the main vehicles for disseminating costing results and serve as references in the future. The quality of these documents is thus critical for costing analyses to be taken seriously for their own aims and objectives, and other stakeholders use these documents as references to inform new costing analyses.

### 4.1 Perceptions of quality from key informants

Key informants had overall positive impressions of the quality of the costing documents. Interviewees spoke of intensive costing exercises being integrated into strategic plans and described how costing quality has improved over time. For instance, some informants could recall when regional unit cost estimates were used in costing documents and praised the newfound efforts to generate local unit costs.

*“Zimbabwe is known for high quality, robust costed strategic plans”*

*“Costing is getting better, initially we were just costing for costing’s sake. Ten years ago you would find instances where costs were not supported by assumptions.”*

*“In terms of costing, the results speak for themselves, We were impressed by the outcome of our work. By sharing the costing for external validation it means that we as a country were happy with what we produced.”*

*“Costing has helped in all areas: treatment, care and support, human resources for health, ARVs and lab commodities, even provisions for the supply chain to make sure that health products we procure are dispensed to patients.”*

Finer points of concern involved an inconsistency across costing efforts and need for more frequent costings to better harmonize estimates.

*“There are certain areas that are costed which could be more efficient, especially prevention activities.”*

### 4.2 Quality assessment of costing products

Pharos reviewed key documents against the GHCC criteria to evaluate quality, finding high scores in study design and lower scores in analysis and presentation.

Overall, the costing exercises included the majority of components in the GHCC rubric (ranging from 13/20-16/20), and most documents scored highly in terms of robust study design and documentation of resources. Documents were stronger in reporting assumptions related to resource use and measurement (i.e. intervention targets and consumable volumes), likely because they were often tied to strategy documents that lie out these specifics. Based on our document review, the HIV costing system fares well in linking costing exercises to strategy and study calibre.

Documentation of costing methodology and data sources was weaker across all documents. In particular, the reporting of valuation and pricing component of analyses was often incomplete. No document received more than half points in this area. Specifically, currency conversions, depreciation approach, and inflation rates were rarely reported. With the exception of MoHCC

*Health Sector Resource Mapping Report and Phase 2 Report: Improving the Allocative Efficiency of the HIV Response Across the Care Cascade in Zimbabwe*, the documents were also poor on analysis of limitations and biases and reporting on conclusions. Most documents had little interpretation and summary of the cost results.

A summary of average scores for the three key high-level documents is shown below, and scores and detailed descriptions of each of the thirteen documents reviewed can be found in Annex IV.

Figure 5. Summary of average Pharos reviewers' quality scores for 3 key high-level documents

	Criteria area				
	1. How robust was the study design and purpose?	2. What was the quality of the costing methodology and data sources?			Total
		2A. Service use and resource measurement	2B. Valuation and pricing	2C. Analysis and presentation of results	
<b>ZNASP IV</b>	7/7	3/4	2/4	1/5	13/20
<b>GFATM Funding Request</b>	7/7	4/4	3/4	2/5	16/20
<b>IC 2.0</b>	7/7	2/4	2/4	2/5	13/20

#### 4.3 Assessment of key vertical documents

The same process was used to evaluate six other vertical costing exercises (shown in Figure 6). Each of these costing exercises was focused on one part of the HIV program, such as testing or prevention of mother to child transmission. Vertical costing documents displayed the same trends as the high-level costing documents. Vertical documents scored between 13-15/20 with high scores for study design and robustness and service use and measurement, and lower scores on valuation and pricing and analysis and presentation of results. Detailed descriptions of each of the six vertical documents can be found in Annex IV.

Figure 6. Summary of quality assessments of vertical documents

	Criteria area				Total (average)
	1. Study design and robustness	2. Costing Methodology and Data Sources			
		2A. Service use and measurement	2B. Valuation and pricing	2C. Analysis and presentation of results	
<b>HIV Testing Services Strategy 2017-2020</b>	7/7	4/4	1/4	2/5	14/20
<b>Phase 2 Report: Improving the Allocative Efficiency of the HIV Response Across the Care Cascade in Zimbabwe</b>	7/7	3/4 2/4 1/4	2/4 1/3 2/4	5/5 4/5 3/5	14/20
<b>The Plan for Elimination of Mother to Child Transmission of HIV &amp; Syphilis in Zimbabwe 2018-2022</b>	7/7	2/4 3.5/4	1/4	2/5	13/20
<b>Sustainability Transition Implementation Plan: Voluntary Medical Male Circumcision</b>	7/7	4/4	1/4	1/5	13/20

<b>Implementation Plan for HIV Pre-Exposure Prophylaxis in Zimbabwe</b>	7/7	<sup>3</sup> / <sub>4</sub>	2/4	1/5	13/20
<b>MoHCC Health Sector Resource Mapping Report</b>	6/7 5/7	5/7 4/7	2/4 1/4	4/5 3/5	15/23
*Scores that differed were reported individually, while consensus scores were reported once					

#### 4.4 Strengths

The document review revealed these strengths across HIV costing documents:

- **Documents linked to strategy and policy recommendations.** All costing documents are well aligned on strategy and policy recommendations, suggesting a common foundation to build upon.
- **Documents reflect robust study design.** All documents scored highly on description of study objectives and design.
- **Documents record service use and resource measurement to implementation.** Most documents clearly report on assumptions related to service use and resource management, i.e. program targets and epidemiological metrics.

#### 4.5 Weaknesses

Several gaps existed in some of the documents reviewed during the case study, mostly related to documentation of assumptions:

- **Costing documents did not provide interpretation of the results.** In the main costing document (or anywhere), there was no attempt to put the costing results in context by describing the implications of the costing for the program, such as the costing's potential impact on budget or planning.
- **Costing documents did not report limitations or potential biases.** Costing documents did not report on the authors' view on the limitations of the costing and their own biases in selection of methodology or data sources. These perspectives are important to understanding how to re-purpose costing exercises and their associated data.
- **There was no systematic reporting of inflation, discounting and currency adjustments in the documents reviewed.** Economic assumptions were missing in the majority of documents. In a country with a highly unstable currency and precarious financial outlook, these assumptions are needed to accurately compare unit costs across time and re-apply unit costs to other purposes.
- **There is a lack of documents on primary data collection.** There are many primary sources for data, as will be discussed later on, including price supply lists from international partners and Ministry National Quantitation documents. In contrast, full primary costing studies, that do not just look at real-world program records but rigorously measure the unit costs in a scientific way, are lacking. Additional costing research studies should be conducted to confirm unit costs are precise and account for all actual real-world inputs. For example, the unit cost for ART could be estimated to be too low if it only includes costs of ARVs, without including the full costs of human resources required to manage the patient on ART.

- **We also observed a mixed approach in how the various documents handled human resources inputs to programming.** Despite human resources being one of the most critical inputs, the methodology for accounting human resources in the program design varies significantly.

## Chapter 5: HIV Costing Data, Skills, and Processes in Zimbabwe

### 5.1 Data inputs

Cost estimation requires input data on unit cost information, quantity estimates (based on epidemiological estimates and population sizes), and economic assumptions. Strong data sources are necessary to accurately estimate costs. Below is a summary of the available unit costs and their strengths and weaknesses.

#### 5.1.1. Landscape of costing data sources

For most key data inputs into HIV costing, there are numerous sources produced by local stakeholders. In the absence of local sources, data from the regional level or neighbouring countries are used. Using national unit cost information from within Zimbabwe increases the precision of cost estimates and ensures that costing reflects the local reality.

Major sources of costing data include both primary data, such as programmatic budgets and records, and secondary sources, such as previous costing exercises, but data could also come from primary data collection exercises. Common sources for unit costs, quantity estimates, and population are listed below in Figure 7.

Unit costs are often the scarcest data inputs. Unit cost sources for key biomedical interventions appear to be robust with many sources listed, including price lists from UNDP and PEPFAR, national procurement data, and peer-reviewed literature and previous GFTAM applications. A variety of different unit costs can be helpful, but estimates need to be reconciled into an acceptable average for use. In some cases, a large number of disjointed sources may indicate duplication of efforts and unnecessary inconsistency in unit cost assumptions across studies. A wide variety of unclear unit cost assumptions can also sow confusion on what the unit cost represents. For example, ART is a complex intervention with many inputs, including medicines and human resources. Across different sources assumptions on which human resources inputs are associated with ART can become muddled. Over time, tracking the assumptions made across different unit cost sources becomes challenging and some level of detail is likely lost. Unit costs should be systematically averaged

In comparison to key biomedical activities, there are fewer sources on costs of social and behavioural interventions or community-based activities.

Quantity estimates, such as epidemiological burdens and population sizes, appear to have high-quality data sources available. The smaller number of sources, with the ZNASP and ZIMPHIA being dominant, may point to greater consistency across costing studies in these assumptions.

Economic assumptions have much fewer reported data sources, mainly Treasury reports and key informant interviews, which could indicate data limitations.

Figure 7 summarizes the major sources of unit cost, quantity estimates, and economic assumptions in Zimbabwe.

Figure 7. Major sources of unit cost, quantity estimates, and economic assumptions in Zimbabwe

	Secondary data	Primary Data
<b>Unit cost information</b>	<ul style="list-style-type: none"> <li>Peer-reviewed literature</li> <li>GFTAM application</li> </ul>	<ul style="list-style-type: none"> <li>National procurement data</li> <li>PEPFAR programmatic data</li> <li>GDF January 2020 Medicines Catalogue</li> <li>UNDP price list</li> <li>International Medical Products Price Guide</li> <li>NASA</li> <li>Research studies</li> </ul>
<b>Quantity estimates (Epidemiological/Population sizes)</b>	<ul style="list-style-type: none"> <li>Peer-reviewed literature</li> <li>ZNASP</li> </ul>	<ul style="list-style-type: none"> <li>DHS</li> <li>ZIMPHIA</li> <li>PEPFAR programmatic data</li> </ul>
<b>Economic assumptions</b>	<ul style="list-style-type: none"> <li>Klls</li> </ul>	<ul style="list-style-type: none"> <li>Treasury reports and publications</li> </ul>

During the document assessment process (results reported in previous chapter) the sources for each document reviewed were extracted. A list of these sources can be found in Figure 8 in Annex V. Many data sources are consistent across documents, and there is a healthy mix of secondary and primary data sources. This list does not communicate which sources were given more weight than others, but in the least shows that a diverse range of data sources were explored.

### 5.1.2. Perceptions of costing data from key informant interviews

Key informants did not have many comments on the data sources, but the comments that did arise mostly related to unit costs. These comments emphasized the diversity of sources for unit costs and the lack of strong data sources for economic assumptions:

Unit costs-

*“Unit costs come from a mix of suppliers and historically derived costs, but these should be averaged for better accuracy.”*

*“It is difficult to disentangle costs in the continuum of care versus in clinical care, for instance “intervention costing” speaks to costs accrued in a specific HIV-related activity but these may differ from the actual cost of managing an HIV patient.”*

*“Human Resources for Health (HRH) are a major cost driver of the Zimbabwean Healthcare system, “swallowing up 70-80% of the national budget”. Unfortunately, these costs are difficult to disaggregate by disease programme. Previously HRH costs were left out in error, and there is also an issue of duplication of efforts.*

*“Getting to the ‘Last Mile’ costs for improving access in hard to reach or rural locations are not factored into our NSP costing. We need to better incorporate the excess costs of increasing access, particularly given that decentralization is a key component of the 2020 ZNASP IV.”*

*“Because costing exercises are usually conducted to support strategic planning and resource needs estimation, program beneficiaries may have the incentive to overbudget to protect*

*against a shortage of resources. There remains resistance from partners to agree on common unit costs and leading partners prefer to continue with their own unit costs.”*

*“Expenditure reporting was not systematized or linked to unit costs, representing a gap in the ability of end users to apply cost estimates to programmes.”*

*“For health products we have good unit costs but for program costs like training, workshops, supervision, and management, our unit cost data are less robust and we seem to overbudget for these things. Whether we underspend because our targets are too optimistic or our actual costs are lower, is currently unclear. But we need to find ways to spend more efficiently on these non-commodity areas”.*

Economic assumptions-

*“Line items can be controversial, there is an issue with pricing in the Zimbabwean market as procurement price variation can vary by 40%.”*

*“Costing has been affected by the inflation and economic contraction, so we base calculations off of USD. However, in the last three months unit costs for interventions are unusually low due to inflation—which is erroneous as the cost of doing business in Zimbabwe is actually increasing.”*

### 5.1.3. Strengths in costing data

- **Costing exercises pull from a wide range of data sources.** Most costing exercises draw on multiple sources, suggesting that a comprehensive search for the best data available is performed. This variety also reflects the large number of costing studies available to build on.
- **Data is re-applied across costing studies.** Key costing exercises appear in the reference lists of other costing exercises, suggesting that costing studies share common data sources as their foundation.
- **There is strong consistency across epidemiological assumptions in costing exercises.** The ZNASP and annual AIM estimation process has led to common estimates for prevalence and population sizes that can be carried out across exercises.
- **Although not listed in the main documents, the majority of unit cost assumptions can be obtained from study sponsors** when requested. These assumptions are clear, draw on cited sources, and are widely accepted by implementing partners.
- **Most unit costs are drawn from primary implementation data.** This is especially true of the GFATM funding request.
- **In most cases the unit costs are reviewed by more than one person,** TWGs and other interested stakeholders are also consulted.

### 5.1.4. Weaknesses in costing data

- **Unit costs vary across key studies:** Although there is some overlap in costing sources across costing exercises, there is a lack of harmonisation of unit costs and unit costs are re-calculated for ad hoc exercises. Currently, studies may use very different unit costs for the same intervention. Discrepancies in unit costs across PEPFAR, NAC, and Global Fund exercises were noted by stakeholders and observed during the document review. Multiple stakeholders also highlighted a concerning variation in unit costs for human

resources for health (HRH) and social behavioural interventions, which are large program cost drivers, particularly human resources. There should be a database that is accessible to all stakeholders with detailed unit costs.

- **There is no central repository of previous costing work.** Data from costing exercises is not stored in one central location. Most studies seem to reference the historical literature, but technical experts must search to obtain these earlier studies.
- **Full costing analyses are not publicly available:** No cost study reported on or attached the underlying calculations and detailed costing assumptions within its public-facing document. The underlying excel sheets and documentation had to be requested from the study authors during the document review. These calculations and unit costs must be made publicly available to prevent duplication of investments in data collection and to facilitate consistency of key assumptions across planning documents.
- **“Last Mile” excess costs for service delivery to rural locations are not always included:** while it is generally agreed that service delivery to remote areas is more expensive, this variable is not always included in HIV intervention costing, leading to discrepancies across estimates.
- **Difficulty separating HIV-specific costs from indivisible Health Systems costs.** HIV services fall under a wider umbrella of health systems activities, making it technically difficult to separate and attribute the share of these health systems costs that should be “charged” to HIV. This is the case for example with multi-purpose health workers, primary health care facilities, supportive supervision that may cover several diseases at the same time, lab sample transport, and many other items. Costing becomes even more challenging when there is understandable pressure on HIV programs to integrate with other parts of the health system.

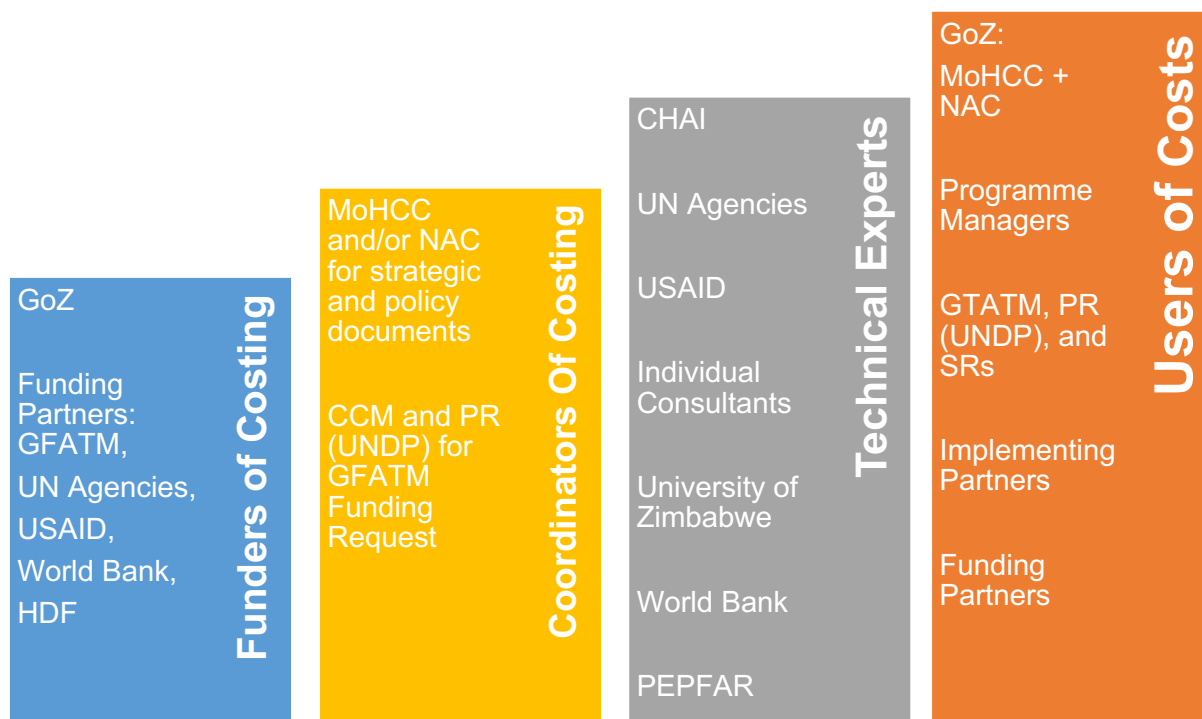
## 5.2 Skills in HIV costing

### 5.2.1 Summary of key stakeholders

There are various players involved in HIV costing ranging from technical producers of costs to users of cost estimates for programming. The four main groups of stakeholders include 1) Coordinators 2) Technical experts 3) Funders and 4) End users. Either a government entity or the country coordinating mechanism (CCM) and Global Fund Principal Recipient provide leadership and guidance on the costing process. MoHCC’s AIDS and TB unit and National AIDS Council (NAC) are the two main custodians from a government perspective. Consultants are engaged either within existing institutions (e.g. USAID, DFID, CHAI, UN Agencies, World Bank, ICAP) or are hired by these institutions to provide technical know-how. Funders of costing work include both the government and international partners, such as USAID, UNAIDS, GFATM, and UNDP. The end users of the document include all the organizations involved in funding, coordinating, and generating technical inputs, in addition to implementing partners and program managers on the ground.

Figure 9 provides a summary of these stakeholders at different levels.

Figure 9. Stakeholders of HIV costing in Zimbabwe



Technical expertise for costing exercises comes from multiple sources, but in Zimbabwe all experts come from outside the government. The ZNASP IV, GFATM Funding Request, and the IC 2.0 all rely on a small pool of external consultants to lead the costing. Consultants selected are health economists with a deep understanding of the HIV landscape in Zimbabwe and strong relationships with key stakeholders. One reason for the reliance on external consultants is the time sensitivity of these documents and a need to produce high-quality results quickly – though it is possible that by planning well in advance and grooming more in-house expertise, Zimbabwe could use more in-house specialists to conducting costing exercises.

In contrast, vertical costing exercises are more likely to rely on experts inside stakeholder institutions. For example, the costing of the HIV Health Sector Plan and HTS Plan was led by CHAI at the request of the MoHCC. Even though CHAI experts are outside the MoHCC, CHAI works closely with the Ministry on a daily basis. The World Bank also provided the technical expertise for the Allocative Efficiency Analysis in-house and ICAP performed the costing themselves for the HIV Costing Study. In no studies did the NAC or MoHCC lead the technical parts of the costing. This arrangement has been in place for multiple ZNASP and GFATM Funding Request cycles. Despite these different arrangements and stakeholders, no one institution has taken initiative to provide technical quality assurance across costing exercises.

No efforts on training or capacity building for HIV costing were identified in key informant interviews. In particular, no programs have been introduced to build the needed technical expertise within the MoHCC or the NAC.

Figure 10 below summarizes the key coordination and technical roles in costing exercises.



Figure 10. Summary of key institutions involved in costing exercises

Document	Summary of coordination and technical responsibilities	Key Institution	Technical expertise
<b>ZNASP IV</b>	External consultants are engaged to lead work, collaborating with various teams from different pillars of the response. The work is driven through consultative meetings (national and sub-national), technical working groups etc.	NAC, with support from various stakeholders.	External Consultant leads the costing
<b>GFATM FR</b>	CCM assembles a core team of consultants, supported by PRs, SRs and various stakeholders. Consultative meetings are held, and decisions made by the CCM	CCM leads the process with support from MoH, NAC, PRs and various stakeholders. CCM makes the final decisions and submission	External Consultant leads the costing
<b>Investment Case</b>	NAC assembles a team of consultants with support from technical partners such as UNAIDS.	NAC, with support from various stakeholders.	External consultant leads the costing
<b>HIV health sector plan</b>	MoHCC engages external TA to support the process of consultations at all levels including working with various TWGs	MoHCC leads the work with support from other stakeholders.	CHAI leads the costing
<b>Allocative efficiency analysis</b>	MoHCC, NAC and World Bank lead the process of consultations guided by a team of experts from WB.	World Bank leads the work with support from MoHCC, NAC and other stakeholders	World Bank leads the costing
<b>HTS</b>	MoHCC engages external TA to support the process of consultations at all levels including working with various TWGs	MoHCC leads the work with support from other stakeholders.	CHAI leads the costing
<b>HIV costing study</b>	ICAP and MoHCC commissions the work. The technical process are led by ICAP with guidance from MoHCC	ICAP with support from MoHCC, NAC and other stakeholders	ICAP leads the costing

Despite the fact that the government is not the lead technical partner on costings, there is strong understanding that the MoHCC or NAC should be the owner of costing results. After costing exercises are finalized, the MoHCC and NAC become their permanent custodians, and both institutions embrace this role. In the case of the FR, costing expertise is paid for by UNAIDS and the work is done for the CCM which serves as the owner of the FR budgets and funding landscape spreadsheets. This is shared with GFATM and feeds into a contractual agreement with the appointed PR (which in Zimbabwe is UNDP). In the event of key technical analyses (e.g. Allocative efficiency analysis), the MoHCC and NAC become co-authors of the analytic piece. This arrangement indicates that all partners recognize the importance of the Government owning the outputs, even if the required expertise comes from another institution.

### 5.2.2. Key Informant Interviews

Stakeholders are keenly aware of the over reliance on external consultants:

*“Costing capacity should not rest with one individual, which is currently the case.”*

Stakeholders from many institutions remarked on the need to build technical capacity within the government:

*“It would be best to build capacity in both the NAC and the MoHCC.”*

*“The MoHCC or Ministry of Finance should have a unit that focuses on health financing and developing budgets. We don’t have capacity within the ministry so we as a donor agitate for a TWG or steering committee to identify capacity gaps and monitor conflicts of interest.”*

*“Both CHAI and UNAIDS have costing capacity and the MoHCC has programme implementation capacity, but depends on others for financial needs estimation.”*

*“It is possible to build capacity in the government—there is already some capacity for expenditure assessment tracking and this could be extended to costing. We should ensure that we build capacity both outside and within the government.”*

Stakeholders noted that new initiatives are needed to build this costing capacity within the MoHCC and NAC. They believe these investments would strengthen the quality of the ZNASP and GFATM documents.

*“Due to the tight timeline for costing the GFATM FR, ZNASP and IC 2.0, capacity building and training are not priorities. There is limited training within the NAC, we need a deliberate program with a capacity-building mandate outside of time spent planning for the ZNASP and GFATM FR.”*

*“We develop strategic plans for every level—district, provincial, and national—and need corresponding costing capacity at all levels.”*

Two stakeholders suggested that there might be a role for external consultants in some cases:

*“Brain drain is a real problem, lots of talented Zimbabweans are working in other neighbouring countries. Sometimes it is better to have an outsider with regional expertise involved in costing due to the controversy and politics associated with resource allocation.”*

*“Even if we have local experts doing the costing, I think it is still important to have an outside expert to provide feedback on the results”.*

### **5.2.2 Strengths in costing skills and capacity**

- **External partners have strong technical skills to complete costing.** Zimbabwe’s costing outputs are well-regarded. There are a number of stakeholders who hold costing expertise. For high-level costings, external consultants usually step up to conduct the costing on time. For vertical costings, partners like ICAP, CHAI, and the World Bank lend their deep expertise to complete the exercises.
- **The Government retains ownership of costing outputs.** Although the Government does not complete the costing, there is a strong understanding that the Government, either the NAC or MoHCC, should remain the custodian of the policy or strategic document.

### 5.2.3. Weaknesses in costing skills and capacity

The weaknesses observed in skills and capacity relate to the lack of technical capacity within the government. The high quality of costing products is due to the expertise of external partners, but efforts to strengthen the capacity of the MoHCC and NAC should be made.

- **There is a heavy reliance on external consultants:** Experts vary in terms of scope and source. Programmatic experts are usually drawn from existing structures and TWG platforms are used. Costing experts are either seconded by partners (from their organisations), or independent consultants are hired to support and lead the exercise. A heavy reliance on external consultants exacerbates the lack of routinized technical approaches to costing. On one hand independent consultants are impartial and bring external experience and perspectives, but on the other hand, institutional capacity building is at stake.
- **No one individual or institution provides quality assurance or technical guidance for all costing processes.** Different organizations fill technical roles in their own way. For instance, CHAI is the technical lead for health sector planning while often external consultants fill technical roles on other costing exercises, including for the ZNASP IV and Investment Case. Given the lack of a central source of quality assurance, different standards for costing exercises persist across exercises. Methodological expertise and quality assurance efforts are dispersed across a pool of external consultants that may not have a full appreciation of the extent of HIV costing activities nationally and who may not be around to bring their knowledge to the next costing exercise.
- **There are no current capacity transfer initiatives:** Technical capacity to conduct costing has not been appropriately transferred from a limited pool of experts, usually external consultants, who consistently perform the ZNASP, GFTAM, etc costing to in-house staff at the MoHCC. This has not happened for two main reasons: a) no defined initiative to guide skills transfer, and b) overall limited resources within the Ministry of Health to take on new projects. There is not enough staff to take on costing, as practitioners with the appropriate skill set are currently fully occupied with resource reporting.

## 5.3 Costing processes

This section describes the steps involved in different types of costing exercises from formulation and execution to validation. Costing exercises are either primary or secondary in nature.

Primary costing is when unit cost and scale data are collected first-hand, while secondary costing relates to when the exercises source estimates of unit costs from other existing sources.

These exercises have different approaches and are each described below.

### 5.3.1 Key activities in primary costing

Zimbabwe has limited experience in conducting primary level costing exercises, the process is long and usually has limited interest from the stakeholders. There have only been a limited number of primary costing exercises conducted (the ICAP work on HIV ART and PMTCT costing). Approaches adopted to inform the costs are model based, mainly because of the lack of dedicated personnel or unit to develop, standardise and maintain the unit costs. Costing is done on an ad hoc basis when a need arises, and it is usually given a limited time frame.

For primary level costing exercises the approach is different and follows the below stages, similar to those developed by UNAIDS<sup>28</sup>.

- 1) **Development of methodology and tools** - this is the primary level approach to costing HIV interventions, and involves actual estimation of the ingredients to the various interventions e.g. Human resources, supplies, utilities, equipment, buildings and infrastructure, utilities, travel costs, overheads, contracted services, etc
- 2) **Field visit** – this involves actual quantification of the ingredients to HIV intervention delivery. Involves data collection, measurement of working space, collecting utility bills, collecting information of the above. A selected sample of sites, which are representative of the entire ART sites, are visited.
- 3) **Data analysis and reporting** – analysis of the entire field data and estimation of the total costs per patient per year.

### 5.3.2. Key activities in secondary costing exercises

Key activities for secondary costing exercises, including strategic plans, implementation or operational plans, using high level costing, modelling and Activity-based Costing (ABC) approaches are split into 5 categories:

1. **Scoping exercise** – this includes defining the parameters and use of the costing exercise. It includes defining time horizon, purposes of the costing exercise, identifying suitable costing approach, discounting, inflation, and target interventions. This is generally setting the tone of the costing exercise and developing an approach. Usually a review of various costing approaches is done at this stage and agreeing on the suitable approach to take. The consultations are usually done between the client and the lead costing expert. At this point, there is an agreement on process, stakeholders, and timelines.
2. **Initial consultations** – this usually entails gathering key documents, defining the interventions, gathering and synthesizing of unit costs to inform the basics of costing. It also involves using the initial consultations to calibrate the model or costing approach adopted. If the costing approach is an ABC, this stage is used to define the unit costs and standardise them, for example costs may include: TA rates, support and supervision rates, training costs per person, fuel, printing, demand generation unit costs etc. The result of this stage is a clear and calibrated model, with unit costs developed and an intervention list agreed.
3. **Second level consultations** – usually the costing process is consultative and inclusive. This stage is now used to gather the prevalence, coverage, and targets for various agreed interventions. If it is an ABC approach, then we use this stage to unpack the specific activities for each intervention. This results in an agreed-upon set of activities and quantities.
4. **Consolidation and estimation of total costs** – this stage involves bringing everything together from stages 1 through 3. The “A x B = C” is done at this stage. This is based on

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<sup>28</sup>[https://files.unaids.org/en/media/unaids/contentassets/documents/document/2011/20110523\\_manual\\_costing\\_HIV\\_facilities\\_en.pdf](https://files.unaids.org/en/media/unaids/contentassets/documents/document/2011/20110523_manual_costing_HIV_facilities_en.pdf) (accessed August 21, 2020)

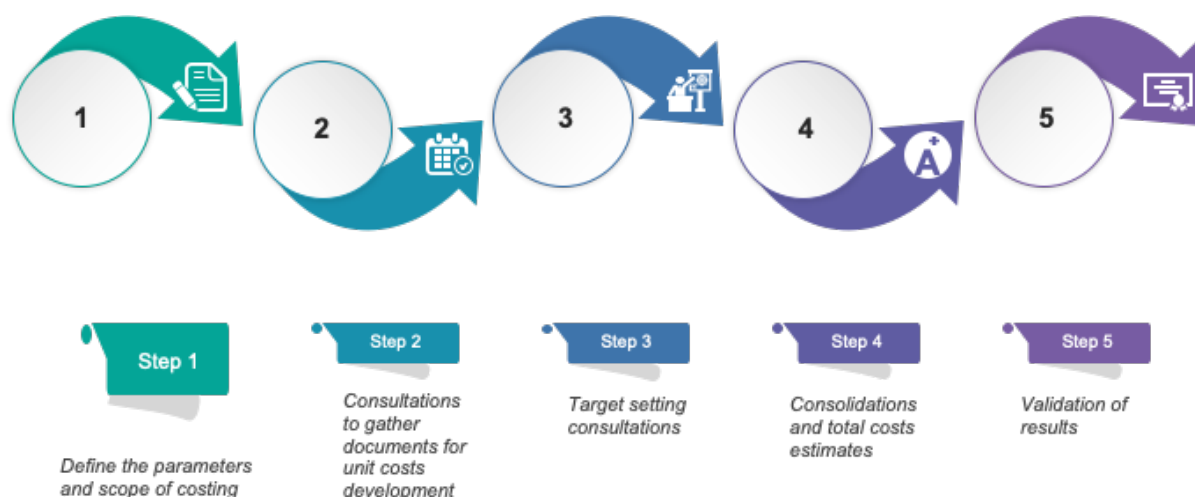
everything gathered in the previous stages. The result is an initial picture of the costs of the strategy, interventions etc.

This stage might involve use of existing modelling and costing tools, such as: Excel-based models, including excel templates provided by GFATM; Spectrum Goals Resource Needs Model (RNM); OneHealth Tool (OHT); and Optima.

5. **Validation of results** - this stage involves presenting the results of the costs to the stakeholders and cross-walking the figures, triangulation and validating the results. This is done in a workshop approach in some cases. The result of this exercise is an agreed set of costs that is ready for peer review.

This process for secondary costings is illustrated in the figure below.

Figure 11. Process of key activities for costing



This process is also involved in secondary costing of key vertical intervention strategic planning, such as HTS and PMTCT. A recent example of these vertical strategies include the HIV Testing and Counselling Strategy.

### 5.3.3. Processes for key high-level strategic documents

The three most important secondary costings accompany the ZNASP, GFATM funding request, and the investment case. Additional details about these documents are provided below.

#### ZNASP Process:

- The ZNASP requires a full costing of the entire HIV program every four years.
- A core team was set-up to steer and lead the process. With technical expertise from UNAIDS, the unit costs were developed and presented for validation and review by the steering committee as well as external teams from Pharos group.
- Targets were drawn from Spectrum through a consultative process involving a series of workshops.
- The results of the NSP costing were also shared to the key members of the HIV stakeholders, external partners as well as other institutions e.g. UNAIDS, Global Fund

and Pharos team. These are in-built in the process and allow for external peer review and validation of the results.

#### **GFATM Process:**

- Global Fund Funding request requires a detailed cost estimation (in addition to a costed NSP and IC) every three years.
- Global fund processes are systematic in approach and execution. The Global Fund provides windows for peer review either through a) mock TRP; b) GFATM Country Team; and finally, c) the actual TRP for decision processes. However, before submission, the GFATM insists on a consultative process that is inclusive, and the mandate is bestowed upon CCM. CCM provides guidance, peer review and endorsement of the process and final outputs. At this stage, PRs are part of the process as well. UNDP is the PR for Zimbabwe's GFATM grant.
- In general, a number of processes were put in place a) a core-team was set up led by Ministry of Health and Child Care and National AIDS Council. Members of the core-team included (but were not limited to), UNAIDS, PEPFAR, DFID, UN Agencies, CHAI, Ips etc. These stakeholders provided peer review and also resources for the process (financial and technical resources).

#### **IC 2.0 Process:**

- The investment case 2.0 was developed with a different time horizon (usually 5-10 years). The objective was to ensure informed investment decisions towards HIV programming, which can also be used to engage governments (Ministries of health and finance), independent funding partners such as World Bank, PEPFAR, DFID, UN agencies, CHAI etc. and to solicit for funding for HIV.
- The HIV investment case informs priority setting, estimates long-term resource needs and informs the ZNASP.
- In the recent process, a core team lead by UNAIDS, under leadership from MoHCC and NAC was appointed. Peer review was provided through local peer-review meetings and externally through UNAIDS, Pharos and others.

Figure 12 below summarizes the role, approach, key stakeholders, and frequency of the different secondary costing exercises in HIV costing in Zimbabwe.




#### *5.3.4 Coordination and leadership*

Coordination of HIV costing is usually led by the Ministry of Health and Child Care's (MoHCC) AIDS/TB Unit or the NAC. Depending on the costing exercise, the programme manager for that specific thematic pillar in one of these institutions will lead the costing. The main exception is costings accompanying funding requested. The CCM leads the GFATM funding request with support from the principal recipient, UNDP. Other funding requests (PEPFAR COP, WB PIMs) are usually coordinated by the institution itself with support from the government. In all funding applications, thematic working groups (TWGs) for various pillars of the HIV response are consulted as part of consensus building and prioritisation exercises.

The implementing, funding and technical partners are also involved in funding costing exercises. The process is usually led by a lead consultant, either an externally sourced TA or in-house

support from institutions with capacity (i.e. CHAI). Other institutions (CHAI, UNDP, PEPFAR) provide high level quality control and review.

Figure 12. Summary of processes for types of HIV costing exercises

	 Role	 Key stakeholders	 Frequency
Strategic Plans (i.e. ZNASP)	Strategic information to identify efficiencies, effectiveness and resource allocation for HIV delivery. This is also used to inform financial gap analysis, equitable allocation and resource mobilization efforts.	Usually involves all HIV stakeholders beyond health sector (ZNASP) otherwise only health sector stakeholders for the HIV health sector specific plans	Usually 5-year strategic plans e.g. ZNASP
Operational Plans	To inform budget developments and identify resource gaps during implementation	Usually involves all HIV stakeholders beyond health sector (ZNASP) otherwise only health sector stakeholders for the HIV health sector specific plans	Usually 3-year operational plans, reviewed at the mid-term of the strategic plans
Annual Workplans	Informs annual workplan budgets for public sector resources and development partners plans	Health sector programme managers	Annually
Resource Mobilization (GFATM FR, PEPFAR)	Informs funding requests to donors such as Global Fund, PEPFAR etc	All stakeholders including CCMs, PR and SRs	Every three years for GFATM and annually for COP (PEPFAR)

#### 5.3.4. Feedback from key informant interviews

Key informants consistently reiterated that costing exercises are inclusive with the same general approach, but the costing methodology can vary substantially across exercises. In particular, key informants spoke of differing costing tools, or models, used across studies and how these tools can lead to varying results. Informants also suggested a more rigorous validation process is needed.

On technical approaches used in costing, stakeholders remarked:

*“WHO wants to promote the OneHealth costing tool, but CHAI is in charge of most vertical costing and uses a different calculation technique and the GFATM request is costed using the specific GFATM template. UNAIDS follows the resource needs model (RNM), and Avenir’s*

*VMMC model is also used for programmatic costing. There is disagreement on which technical approach should be used, leading to an inability to compare costing documents to one another.”*

*“CHAI estimates impact through Weill-Cornell University AIDS models, using different approaches that help the government understand and choose which scenario to pursue.”*

*“Avenir generates ballpark costs, using regional numbers at times, and employs top-down costing approaches for commodities. These estimates are then linked to impact using a disease model (such as Spectrum).”*

On stakeholder engagement, stakeholders emphasized the role of the MoHCC and the NAC:

*“The MoHCC and NAC are very engaged in the costing process, even reviewing the budget line by line.”*

*“It would be useful to have an independent cost reviewer or systematic validation process, rather than relying on one consultant to conduct all costing.”*

### 5.3.5. Strengths in HIV costing processes

Overall, the strengths of the HIV costing revolve around stakeholder engagement.

- **HIV costings are considered collaborative and inclusive:** It is standard approach in costing exercises to involve a broad group of stakeholders during information-gathering consultations and validation. Stakeholders feel that they are appropriately involved in costing exercises.
- **Costing exercises have a strong common backbone:** The specifics of the costing approach vary across exercises, but a strong common understanding of the key steps exist, i.e. scoping, consultations, technical approach, and validation. This backbone provides a strong foundation to build on. Instead of starting from scratch to improve the quality of costing exercises, this common understanding of the key costing steps will allow small changes to be more quickly adopted.

### 5.3.6 Weaknesses in HIV costing processes

Although most stakeholders report feeling included in costing activities and have positive perceptions of the costing process, there are important methodological inconsistencies across the HIV costing landscape that stakeholders may not be conscious of at surface-level.

- **There is no consistent leadership in HIV costing:** While HIV costing is seen by the stakeholders as collaborative, there is no designated focal point to coordinate all costing processes nor a dedicated hub within the government for overseeing costing work. Each costing exercise is led by different institutions, leading to duplication of efforts and re-costing for future endeavours. There should be an agreed-upon leadership structure to streamline costing for the health system.
- **Processes are not standardized.** There is a clear timeline for when strategic documents should be produced, but there is no regular process in place for reviewing and building upon previous strategies. These strategies often have a strong foundation of data and assumptions to build upon, and current costing activities miss opportunities



to leverage this data to its full potential. This lack of standardization is largely driven by the way ad hoc groups of consultants are convened for each costing exercise.

- **There are no standard operating procedures exist for costing:** The specific methodology and assumptions used to conduct costing vary from costing exercise to costing exercise. There is no designated set of tools or templates for costing work and different techniques are used (excel-based tools, models, etc.) without clear standards or the option to compare to past or future costing work. Each time a costing exercise takes place, unit cost development may restart, and these unit costs are traditionally not peer reviewed or critiqued according to standard of comparability and reproducibility. The WHO has suggested using a centralized tool, for instance OneHealth, in all costing exercises. This would minimize the amount of capacity-building needed while also improving comparability across exercises.
- **No systematic review or validation process, particularly for unit costs.** Unit costs can come from varying sources, including directly from expenditure data or from default data in online modes. In some cases, these unit costs are taken to a group of stakeholders for review, but in many cases, this is not done. This validation process is important for ensuring high quality results.

#### 5.4 Moving towards institutionalization of data, skills, and processes

Across HIV costing data, skills, and processes, there is a lack of institutionalization. These parts of the costing system need to be anchored in a national organization (or several) so that home-grown skills are cultivated and maintained, and the sort of standardization and coordination mentioned earlier can be implemented.

There are several barriers to institutionalization. First, there is no one clear organization that should take the lead. The four focal institutions who could potentially take charge include the MoHCC AIDS and TB program, MoHCC Policy Planning, Financing, and Evaluation Department, the NAC and the University of Zimbabwe Department of Community Medicine. Each of the organizations has resources or experience, but each may also have substantial gaps that would have to be addressed.

*MoHCC and the NAC* have a mandate to drive certain HIV processes, as defined and articulated in statutes. The MoHCC AIDS and TB Unit each have a programme office and dedicated finance officer. The programme officers collect granular details and provide key information to facilitate costing. The finance officers, currently limited in number, spend more of their time with financial and management accounting duties for the programme. There are not enough staff numbers to have dedicated efforts towards costing. Experience shows that they have been involved in costing exercises, more as resource persons and less so as leaders.

The current staffing in the MoHCC Policy and Planning department is also quite low. They have focused more on the HSSP, NHA, RM and health financing work. There is expertise for costing the HSSP at a strategic level. However, in the past they have offered limited support to programme-specific costing exercises. The department has tried to institutionalise the RM, NHA and HSSP development and costing, but these efforts have not been sustained. There is still reliance on external technical expertise to support their processes. The current number of internal experts may not be sufficient to build capacity to oversee HIV costing.

The National AIDS Council has the numbers and capacity within its finance directorate to lead HIV costing. However, additional dedicated individuals and efforts are needed to support the

process. Recent epidemic modelling suggest capacity has improved within the NAC. Avenir, an external technical advisor, has trained a dedicated individual to generate epidemiological estimates within the NAC; Avenir peer reviews outputs without directly being involved in their production. This capacity-building model could be used for HIV costing as well.

The University of Zimbabwe has in the past provided consultants that spearheaded HIV costing, financing and modelling work. However, this has been done on an ad hoc basis and no capacity has been transferred to government counterparts. There is enough skill but a lack of funding to support the process of developing tools, standards and frameworks to inform costing. Further, key informants interviewed from the University expressed that they prefer to work with a costing leader situated in the government than to lead efforts themselves. That said, given financial support, databases can be built for HIV costing in Zimbabwe within the University.

This discussion on the relevant expertise and limitations of each of these organizations is summarized in Figure 14.

Selecting one institution to serve as the primary leader and coordinator of country-wide HIV costing activities would help address quality concerns and optimize HIV costing activities by facilitating exchange of information and knowledge from one HIV costing activity to the next.

#### 5.4.1 Feedback from interviews

Key informants expressed support for the concept of institutionalization.

Some stakeholders offered that the Ministry of Health should be the lead:

*“The only group that bring all these partners together is the Ministry. They should take leadership to create a model that we can all use to compare previous costing with current costing and consolidate efforts across partners.”*

*“Institutionalisation should start with the MoHCC. They are already in the process of setting up a unit that deals with health economics & financing—this is where costing data repository should be kept. The University would be more comfortable working for the MoHCC.”*

*“The Department of Policy and Planning within the MoHCC is privy to various funding streams from partners, so they should be responsible for budgeting and health financing.”*

*“The Ministry of Health or Finance should have a unit that focuses on health financing and developing budgets.”*

*“The Health Policy and Planning Unit should be the leader for costing, this would be the best leverage for higher impact. They are responsible for costing broad national health strategies and aligning them to economic frameworks.”*

*“MoHCC should lead institutionalization process, and it should be housed in the Department of Policy & Planning. The NAC and AIDs/TB unit can contribute as stakeholders, but they do not have capacity for costing—all costing has been done by CHAI thus far.”*

*“The unit cost database would be beyond the mandate of the NAC (other conditions rather than HIV) so it would be best to house the database within the MoHCC department of policy and planning. “*

Nonetheless, the NAC did receive some votes. One stakeholder remarked: “*The NAC runs the NASA, so they could be in charge of costing.*”

Figure 14. Summary of existing resources

Institution	Existing resources/ expertise	Limitations
MoHCC AIDS and TB Unit	The pillars each have a programme officer, and there is a dedicated finance officer for the entire unit.	There is limited capacity and technical expertise on costing within the unit. Significant investments would be needed to create costing infrastructure.
MoHCC Policy and Planning	Fully fledged department with qualified economists and planners.	Expertise to support costing activities exists but there is limited department commitment to program-specific activities. A strong training and mentorship environment already exist and could support if additional staff were hired for HIV costing in particular.
Nationals AIDS Council	An established finance department led by a competent Finance Director.	Expertise and a capacity building model exist. Additional staff would be needed to take on HIV costing but limited additional training would be needed.
University of Zimbabwe, Department of Community Medicine (UZ DCM)	Department has public health experts, health economists, modellers and statisticians.	The University has the expertise and capacity but lacks funding to become central hub for HIV costing. KIIs did not recommend that the University take the lead on managing HIV costing, favouring government leadership.

## Chapter 6. Bringing it all together: Recommendations to strengthen Zimbabwe’s HIV costing system

### 6.1 Summary of strengths and weaknesses of costing ecosystem components

Overall, the Zimbabwe HIV costing ecosystem generates relevant products containing results that are trusted by stakeholders. High-level costing exercises are accompanied by robust cost estimations that are accepted by stakeholders and actively inform decision-making. Looking at the impact of costing exercises, the costing documents themselves, and the component ingredients, the main strengths of the HIV costing in Zimbabwe can be summarized as:

- Costing exercises are government-led and inclusive processes:** One of the greatest strengths of the HIV costing ecosystem is that costing exercises are inclusive. The key high-level costing exercises--the ZNASP, Global Fund Request, and Investment Case--are all coordinated at the highest levels of the government HIV response, such as the MoHCC and the National AIDS Council. Other key stakeholders, including implementing and technical partners, are invited and routinely partake in the process as well. All costing exercises appear to follow a common pattern of consultation, estimation, and validation that engage stakeholders throughout the process.
- Costing exercises produce high-quality and respected results:** Stakeholders consistently regarded the cost exercises to be of high quality and expressed confidence

in the utility and impact of the results. The document review reinforced that costing exercises were well-designed and technically strong.

- **Cost estimates inform decision-making:** The estimates real influence on decision-making regarding policy and program planning due to the trust generated from an inclusive process and quality outputs. The cost estimates, particularly the ZNASP and Global Fund Funding Request, directly impact resource allocation across interventions and geographies.

While HIV cost exercises in Zimbabwe have a strong backbone, there is room for improvement. Weaknesses identified by stakeholders and through the document review are summarized below:

- **There is no one institution providing leadership and oversight of costing activities.** The MoHCC and NAC are heavily involved in many costing exercises, but no one institution is expected to provide coordination for each activity. Nor is any institution charged with ensuring quality standards. This lack of pre-defined leadership also leads to missed opportunities to transfer knowledge and leverage outcomes from one costing exercise to inform the next.
- **There is limited technical capacity for HIV costing within the government:** The majority of costing exercises are completed by external consultants. There are few economists or technicians within the government that have the expertise needed to lead and perform a costing exercise. In addition to limited current capacity, there are no efforts in place to change this reality and expand investments in government capacity.
- **Unit cost assumptions vary across studies:** While epidemiological assumptions and targets are consistent across costing studies, unit costs vary. This lack of consistency likely stems from limited access to historic and recently used unit costs and the unnecessary need for experts to recreate unit costs for each new costing exercise. Unit cost assumptions and calculations were only made available to our research team when we requested them from the appropriate costing study authors. These assumptions should be made more public to all possible users.
- **There is no standardization of technical approach across costing studies:** Currently, different stakeholders use their own costing models, including the WHO OneHealth tool, Global Fund Funding Request template, the Spectrum Goals Resource Needs Model, CHAI tools etc. The use of different technical approaches by each institution limits opportunities for cross-checking and validation of others' costing results. The use of these different tools should not be discouraged, but there is limited discussion on the relative strengths and weaknesses of these different tools and no guidance exists on when the different tools should be preferred, nor are there trainings on the use of these costing tools to enhance human resource capacity and open up their use to a wider range of costing specialists.
- **Cost exercises rarely report on all key economic assumptions or potential biases, conflicts of interest, and limitations of cost estimates.** No costing exercise reported on currency conversions and inflation assumptions, despite these economic assumptions being especially important in a volatile economy where such assumptions could change the calculation of a unit cost year to year. Discussion on conflicts of interest, bias, and limitations also provides technicians with information on how to interpret the unit costs and considerations for re-using the unit costs for other exercises. The lack of these details prevents future costing exercises from accurately building on previous work because technicians cannot judge what adjustments are needed to make the unit costs relevant to the current context.

- **While some parts of the HIV response, especially treatment and biomedical prevention measures, have detailed unit costs, there is much less information on the costs of enablers and program support areas.** The cost of commodities, equipment, outreach activities, etc has been studied for Zimbabwe and for other neighbouring countries. There is ample opportunity to compare different unit costs for the same item in these areas and to make year to year adjustments. But activities like advocacy, human rights, female empowerment, etc and program support actions (management, site supervision, training and workshop, monitoring and evaluation, etc) are poorly costed and experts result to standard rules of thumb or coefficients that have turned out to be either wildly inaccurate or have led to massive underspending, or both. More unit costs and better cost estimation techniques are needed for these areas, which can account for up to 30% of the total HIV budget.

## 6.2 Recommendations to improve the HIV costing ecosystem

To build on the strengths while addressing the weaknesses mentioned in this report, Pharos suggests several key recommended actions (see Figure 15). Six of the most important priority recommendations are discussed in greater detail below.

Figure 15. Summary of weaknesses and recommendations for the three major costing ingredients

	Weaknesses	Recommendations
<b>Data</b>	<ul style="list-style-type: none"> <li>• Unit costs vary across key studies</li> <li>• There is no central repository of previous costing work</li> <li>• Full costing analyses are not publicly available</li> <li>• “Last Mile” excess costs for service delivery to rural locations are not always included</li> <li>• Difficulty separating HIV-specific costs from indivisible Health Systems costs</li> </ul>	<ul style="list-style-type: none"> <li>• Establish an open-access database to house a unit cost repository and cost study library</li> <li>• Produce annual benchmark costs</li> <li>• Organize annual cost review meetings</li> <li>• Create a special fund to allow researchers to conduct primary costing studies</li> <li>• Develop more fine-grained and consistent unit costs for program support services, HR, and other components that have weaker cost basis</li> </ul>
<b>Skills</b>	<ul style="list-style-type: none"> <li>• There is a heavy reliance on external consultants</li> <li>• No one individual or institution provides quality assurance or technical guidance for all costing processes.</li> <li>• There are no current capacity transfer initiatives</li> </ul>	<ul style="list-style-type: none"> <li>• Invest in training internal technical experts.</li> <li>• One option is peer-to-peer mentorship between government and external TA while producing costing exercises.</li> <li>• Another option would be to set up a health/HIV cost and financing course at the University or another training institution</li> </ul>
<b>Processes</b>	<ul style="list-style-type: none"> <li>• There is no consistent leadership in HIV costing</li> <li>• Processes are not institutionalized</li> <li>• There are no standardized operating procedures exist for costing</li> <li>• No systematic review or validation process, particularly for unit costs</li> </ul>	<ul style="list-style-type: none"> <li>• Identify an institution to serve as the technical hub for national HIV costing activities</li> <li>• Develop and agree on standard templates for calculating and reporting cost estimates</li> <li>• Ensure that all costing studies are independently validated using a checklist covering e.g.,</li> </ul>

		bias, limitations, and assumed economic parameters (e.g., inflation, exchange rate, etc) <ul style="list-style-type: none"> <li>• Improve sequencing so that NSP costing precedes Funding Requests, PEPFAR COPs, and government budgeting</li> </ul>
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**1. Identify and support a national Zimbabwean institution to serve as the technical hub for national HIV costing activities.** Although most costing activities are coordinated by the MoHCC or National AIDS Council, these institutions do not at present have the capacity to lead technical inputs and provide oversight to costing exercises. A more defined home for HIV costing is needed to address the current weaknesses and create opportunities for further developing the HIV costing capacity in the country. This technical hub would be tasked with ensuring standardization of costing methodologies, housing the open-access database of unit cost and costing studies, putting forth annual unit cost estimates for key interventions, and providing technical expertise to high-level national HIV planning processes. It could also convene stakeholders for discussions on costing exercises, validation of findings, and training activities.

Chapter 5.4 looked at four different institutions to serve as the technical hub, including the MoHCC HIV and TB Unit, the MoHCC Policy and Planning Unit, the National AIDS Council, and the University of Zimbabwe, Department of Community Medicine. While each of these institutions has pros and cons as a hub, preliminary assessment suggests that the MoHCC Policy and Planning Unit might be the best choice. Within the Policy and Planning Unit, expertise to support costing activities already exists. The main limitation is the lack of devoted staff for HIV costing. If additional staff were to be hired, a strong training and mentorship environment in cost estimation already exists to build on. Investments to make the National AIDS Council the home for the NASA have been made in the past; A similar strategy could be undertaken to make the Policy and Planning Unit the home for all HIV cost estimations.

**2. Establish an open-access database to house a unit cost repository and cost study library**

An open-access database is needed to store previous costing studies and unit cost estimates used in the analyses. This resource would improve the accuracy of all costing studies and result in more efficient cost estimation processes, reducing the cost of collecting fresh data and for validation workshops and enabling implementers to focus more on programming and effectiveness of interventions. HIV costing studies for the same year should use consistent unit cost estimates and other economic assumptions, unless there is differing context or objectives for the study that would require adjusting these. This type of knowledge sharing would also prevent duplication of resource deployment across costing studies and increase transparency. Health economists will not have to re-produce unit costs from scratch or at least will not have to spend time tracking down previous costing estimates. Furthermore, a repository would drive standardized frameworks for ingredients-based unit costs. This would allow a local metric for evaluating quality of costing studies, help establish ranges within different implementation contexts, and improve consistency and comparability of CEAs carried out by partners. In a resource constrained setting, such standards would also allow partners to support MoHCC costing exercises with verifiable means and develop these skills locally within routine implementation settings.

During the document review, all custodians of costing exercises were willing to share their underlying calculations and assumptions when asked, which suggests there are few barriers to establishing such an open-access database. If there are concerns of the database being fully accessible to the general public, then it could be password-protected and made available only to accredited stakeholders.

This repository could be modelled off the global health costing consortium repository: <https://ghcosting.org/pages/data/ucsr/app/>. The custodian of the database should be the institution identified as the technical hub of national HIV costing activities (see below). Interviewees suggested it would take approximately 6 months to set up a unit cost repository. If the GHCC is revived and reinvigorated in the coming years, Zimbabwe would also benefit from having a role in the global project.

**3. Produce annual benchmark unit costs** One of the most critical roles for this new technical hub would be producing annual benchmark unit cost estimates. This initiative would help standardize unit cost assumptions across studies. This harmonization is critical given that different unit costs continue to be used by different partners. Partners could adjust the benchmark estimates based on their objective of their study, but a standard reference unit cost would limit variability across costing studies.

An annually updated unit cost repository could allow partners to more regularly explore allocative efficiencies and alternative CEAs. This would be particularly important as Zimbabwe moves towards maintaining epidemic control and as it conducts time-driven, activity-based costing for HIV.

The creation of the repository should also spur efforts to better estimate the cost of program enablers and program management and support activities for Zimbabwe, which until now have not been well calculated or documented with evidence.

A national effort to expand primary data collection studies could also be stimulated by an assessment of the gaps in the existing unit cost information for the country. Such an assessment would help to target the areas to be covered by their primary research studies.

**4. Introduce annual costing review meetings** The technical hub should also initiate annual meetings to convene key stakeholders to review previous costing exercises and validate the hub's unit cost estimates for the following year. These review meetings would help disseminate the work of the hub and ensure further consistency of costing methodology across all stakeholders involved in costing activities. All stakeholders involved in costing exercises, including all government departments, bilateral and multilateral development partners, and implementing organizations, should be invited to these meetings.

**5. Create an internal training and mentorship system for HIV costing.** The establishment of a technical hub within the government would lend itself to supporting an intentional capacity building program to train existing personnel in HIV costing. A collaboration between the Ministry of Health and academia or external consultants could design and deliver annual training workshops. Similar efforts within the National AIDS Council have been made in training epidemiological modelling experts, in collaboration with Avenir Health. Additionally, a peer-to-peer model, such as the one used in South Africa, pairing government personnel with an external consultant to undertake the HIV costing, could also help improve existing capacity within the government.

## **6. Invest in technical capacity and knowledge of HIV costing across all key stakeholders**

A technical hub and an internal pipeline to sustain the hub are critical, but additional efforts should be made to educate all stakeholders on the methodology and interpretation of costing exercises. One-off training programs for stakeholders at different levels of HIV program management would make sponsors and users of cost information more “literate” and better consumers and critics of cost estimation processes and results.

**7. Expand regional exchanges.** Zimbabwe would benefit from regular and structured exchanges with other countries of Eastern and Southern Africa to discuss HIV costing and its use in shaping policies, programs, and spending decisions. Other high HIV burden middle income countries like Mozambique, Zambia, Tanzania, and Malawi must also mount massive responses to HIV and face many of the same issues in conducting accurate, consistent, and efficient costing as does Zimbabwe. The upper middle income neighbours such as South Africa and Botswana are also focusing on mounting large scale HIV programs mainly using domestic resources, and they can also learn from Zimbabwe and vice versa. The UNAIDS workshop on HIV investment cases, costing, and financial sustainability held in Johannesburg in 2018 was cited many times by interviewees as a very valuable forum for their national work. More events like this, sponsored by SADCC and its international partners would help to improve knowledge and skills and energize Zimbabwe in its future HIV costing activities.

## **Chapter 7. Conclusions**

This case study is the first in-depth analysis of the HIV costing landscape in Zimbabwe. In-depth document review and key informant interviews revealed that the system for cost estimation in Zimbabwe is improving over time, with many positive examples of high-level coordination and participation of key stakeholders, good quality products, and significant influence on strategic planning and resource mobilization. HIV costing is playing an important role in providing evidence to secure needed financing, improving resource allocation, and supporting planning and implementation.

Despite these achievements, there is more that Zimbabwe can do to strengthen the data and models, skills and knowledge, and processes that go into its HIV costing system. In particular, this case study highlights the need for investments in greater coordination, standardization and institutionalization of costing activities. Cost data need to be expanded and used consistently across costing studies. National skills can be enhanced. A range of processes for collecting, validating, and using cost information can be improved. This will have spillover benefits for health sector costing in general. New initiatives to establish an HIV costing hub in one of the government institutions, create and maintain a unit cost repository, and foster skills development and information exchange across the many government, civil society, and international partners would contribute to a strong and more effective HIV costing system.

Institutionalization and standardization of costing activities would not only have direct benefits for high-level strategic planning, but would also support Zimbabwe in mobilizing additional resources for HIV and deploying them in a more efficient manner.

During a November workshop with more than 30 stakeholders and chaired by the deputy director of the NAC, participants strongly endorsed the findings in this report and called for a multi-year effort to implement the seven recommendations contained in Chapter 5. During the first part of 2021 it is hoped that more work will be done to develop a detailed scope, plan, and



budget for building a first class HIV costing system for Zimbabwe, including a coordinating hub and a unit cost data and document repository.

This analysis shows that HIV costing has a critical role to play in Zimbabwe. The recommendations put forth here should be considered as part of an effort to build an HIV costing ecosystem that best enables the HIV program to meet its national goals.

## Annexes

### I. Data Extraction Tool

What is the title of the document?	
Which year was is authored?	
What period of resource needs does it cover?	
Author	
Author organization	
HIV intervention(s)	
Target population (s)	
Primary data collection? (Y/N)	
Funder	
<b>B. Process and tools</b>	
What stakeholders were involved? How frequently?	
What was the purpose of the cost estimation?	
What costing approach was used? (Key details of methodology)	
What costing tool was used? (Excel, online model, etc)	
What data sources were drawn from?	
Are these costs updated on a routine basis?	
Did this costing inform any high-level planning process?	
<b>C. Quality</b>	
<b>How robust was the study design and purpose?</b>	<b>[INSERT]/7</b>
<b>What was the quality of the costing methodology and data sources?</b>	<b>Primary data collection: [INSERT]/16</b> <b>Not primary data collection: [INSERT]/13</b>
A. Service use and resource measurement	Primary data collection: [INSERT]/7  If not primary data collection: [INSERT]/4
B. Valuation and pricing	[INSERT]/4
C. Analysis and presentation of results	[INSERT]/5
<b>Total</b>	<b>[Insert] / [20 or 23]</b>
<b>Overall qualitative impressions of document (Strong costing? Weak costing? Comprehensive? Lacking details, etc)</b>	

Quality scoring			
	Possible points	Points awarded	Comments/description
<b>How robust was the study design and purpose?</b>	<b>7 points</b>	<b>/7</b>	
<i>Principle 1</i>			
Purpose well-defined	1 point		
Intervention well-defined	1 point		
<i>Principle 2</i>			
Study perspective (provider, health system, societal, household) named	1 point		
<i>Principle 3</i>			
Cost defined as economic vs financial or real-world vs guideline	1 point		
Cost defined as full vs incremental or net vs future	1 point		
<i>Principle 4</i>			
Unit costs listed and adjustments described	1 point		
<i>Principle 5</i>			
Time horizon and time period described	1 point		
<b>What was the quality of the costing methodology and data sources?</b>	<b>16 points if primary data collection</b>	<b>Primary data collection: [INSERT]/16</b>	
	<b>13 points if not primary data collection</b>	<b>Not primary data collection: [INSERT]/13</b>	
<b>A. Service use and resource measurement</b>	<b>7 if primary data collection</b>	<b>Primary data collection: [INSERT]/7</b>	
	<b>4 if not primary data collection</b>	<b>Not primary data collection: [INSERT]/4</b>	
<i>Principle 6</i>			

Description or justification for inclusion or exclusion of above service delivery costs, supporting change costs, research costs, unrelated costs, and/or other	1 point		
<i>Principle 7</i>			
Measurement of each input is described as either top-down or bottom-up	1 point		
Methods described for measuring human resources inputs, above site/overhead, research costs	1 point		
<i>Principle 8</i>			
Site/client selection process/criteria described (geographic/patient/site sampling and/or sample size calculation)	Primary data collection?  If Yes, 1 point  If No, NA		
<i>Principle 9</i>			
Data sources used to measure units described	1 point		
<i>Principle 10</i>			
Timing of data collection described	Primary data collection?  If Yes, 1 point  If No, NA		
Consideration given to the timing of data collection to minimize recall bias and, where relevant, the impact of seasonality and other differences over time.	Primary data collection?  If Yes, 1 point  If No, NA		
<b>B. Valuation and pricing</b>	<b>4 points</b>	<b>[INSERT]/4</b>	
<i>Principle 11</i>			
Sources of price data reported	1 point		
<i>Principle 12</i>			
Depreciation approach described	1 point		
<i>Principle 13</i>			

Currency year and any conversions reported	1 point		
Inflation rate reported	1 point		
<b>C. Analysing and presenting results</b>	<b>5 points</b>	<b>[INSERT]/5</b>	
<i>Principle 15</i>			
Cost differences across sub-groups analyzed/described	1 point		
<i>Principle 16</i>			
Sensitivity analysis conducted	1 point		
Sources of bias/conflicts of interest described	1 point		
<i>Principle 17</i>			
Limitations described	1 point		
Dataset is open-access/underlying calculations/excel is available	1 point		

## II. List of Key Informant Interviews

<b>Organisation</b>	<b>Name</b>	<b>Role</b>
MoHCC	Tsitsi Apollo	Deputy Director for HIV/AIDS
NAC	Raymond Yekeye	Head of Programmes
CHAI	Alexio Mangwiro	Country Director
CHAI	Munyaradzi Mareke	Health Financing Lead
Independent Consultant	Gemma Oberth	Independent consultant involved in GFATM FR
PEPFAR	Judith Chaumba	GFATM/PEPFAR Liaison
PEPFAR	Ponesai Nyika	Public Health Specialist
UNAIDS	Martin Odit	Strategic Information Advisor, Acting Country Director
UNAIDS	Charles Birungi	Senior HIV Economics, Finance, and Policy Advisor
University of Zimbabwe	Shepard Shamu	Professor of Health Economics
UNDP	Emmanuel Boadi	Programme Manager
WHO	Simbarashe Mabaya	HIV STI Technical Advisor to the MoHCC
World Bank	Christine Lao Pena	Team Leader for Health Portfolio
World Bank	Chenjerai Sisimayi	Health Specialist in Harare
World Bank	Xiaohui Hou	
World Bank	Zara Schubber	Senior Health Specialist

### III. Interview Guide

- Title
- Organisation
- Number of years in the HIV field/other health areas (which ones?)
- Professional training
- Experience in HIV/health costing, financing, economics
- Knowledge of HIV costing exercises from Zimbabwe and other countries
- Role/involvement in the ZNASP IV, FR, and IC 2.0?
- How well did the ZNASP IV, FR, and IC 2.0 exercises go in your view?
- How could the process behind ZNASP, FR, and IC be improved? To make it more efficient and effective?
- Ways to improve quality of costing?
- Perception of impact of HIV costing on programs, policies, budgets
- Best practices/examples where costing succeeded?
- Best practices/examples where costing "failed"
- Perception of overall country capacity in costing: strengths/weaknesses
- How can capacity be expanded?
- Where should the costing capacity be institutionalised?
- Are there tools, manuals, databases on HIV costing that you think need to be created?
- How to preserve data and knowledge of HIV costing?

### IV. Detailed review of costing documents

#### IV. 1. Detailed assessment of key high-level documents

The three high-level costing documents are highly interrelated and rely on many of the same unit cost assumptions and costing approaches. Much of the costing work was completed by the same team of external consultants, and the most recent versions of these documents were all produced in 2020.

- a. Zimbabwe National HIV and AIDS Strategic Plan: 2021-2025: Towards ending AIDS as a public health threat (ZNASP IV)

Overall: 13/23

Robustness and study design: 7/7

Costing methodology and data sources:

- A) Service use and resource measurement: 3/7
- B) Valuation and pricing: 2/4
- C) Analysis and presentation of results: 1/5

The ZNASP IV was authored in January 2020 to cover the 2021-2025 period of resource needs for all populations and all HIV interventions. Costing was done by Travor Mabugu, and primary data was not collected. The purpose of cost estimation was financial planning, to estimate future national funding needs so as to advocate for and justify funding from PEPFAR, the Global Fund and the GoZ.

There were two broad cost categories used in the ZNASP, intervention costs and programme support costs. Among intervention costs were both RNM (Resource Needs Model) and non-RNM interventions, classified as population-based approach and package-based approach respectively. Programme support (overhead) costs were based on historical financing data derived from the National AIDS Spending Assessment (NASA), PEPFAR, GFATM and NAC estimates. Costing work was done using Excel, with OHT, RNM, and Activity-based Costing (ABC) costing tools also used. This costing work informs the ZNASP, and is updated on a five-year basis, and also fed into the GFATM grant request in May 2020. These costs will also be used by the MoHCC and MoF for government budgeting.

The Pharos team concluded that the ZNASP costing was robust, with the methodological approach and underlying assumptions clearly communicated. Unit costs were listed, contextualized in a wide range of sources and some explanations were given for choice. One reviewer expressed that the ZNASP costing may be the most robust costing that exists in Zimbabwe. However, the interpretation of costing results was incomplete and there was not a discussion of limitations or conflicts of interest and sensitivity analyses were not conducted. Shared costs (HRH, training, supervision) were not counted even though the GFATM pays these under current and future grants. The ZNASP IV is still in draft form, and the final document might benefit from a chapter or annex describing the methods, data selection decisions and biases inherent in the ZNASP exercise as well as an explanation of how amortization of capital costs, inflation and exchange rate changes were addressed.

#### b. Funding Request to the Global Fund 2020-2022

Overall: 16/23

Robustness and study design: 7/7

Costing methodology and data sources:

- Service use and resource measurement: 2/7
- Valuation and pricing: 4/4
- Analysis and presentation of results: 3/5

The Global Fund Funding Request (GFTAM FR) was written in 2020 to cover the 2021-2023 resource needs period for all interventions and all populations. The FR document was led by an Independent Consultant in coordination with the MoHCC and CCM. The FR was sponsored by UNAIDS on behalf of the Country-Coordinating Mechanism (CCM) and the GoZ. There were two purposes for cost estimation: first, to estimate the funding gap between total resource needs for the next three years according to the ZNASP IV and available funding from other partners such as GoZ and PEPFAR, and second, to develop plans, targets, and budgets for the GFATM grant to utilize the country allocation.

The costing for the Funding Request to the Global Fund was done from a financial perspective, with annual resource needs adjusted for price changes and inflation. Existing costing from the ZNASP was used in the GFATM FR, including a mix of top down and bottom up costing. Each application module was individually costed using a top-down approach, and then further subdivided into interventions which were each defined by key cost inputs. Costing was also conducted separately for each budget quarter. Costing work was done using Excel. This costing directly informs the GFATM grant allocation process and is updated every three years to

correspond to the GFATM grant cycle. It appears costing is conducted episodically, as costs are updated every five years for the ZNASP and every three years for the GFATM FR, and occasionally redone for other studies or vertical programs.

The Pharos team concluded that the GFATM application costing was very strong, and the approach and methodology were clear and well-documented. All the key assumptions and most data sources were listed and accessible, but some unit costs do not have attributed sources or are listed merely as “historical cost”. The main shortfalls of the costing document were analysis and presentation of results, as there was no description of limitations or potential biases and no sensitivity analysis was conducted. This additional analysis may not be required for the GFATM application, but would be necessary for another future user to apply these unit costs.

- c. Investment Case 2.0: Saving lives, transforming the economy: a case for strategically investing in the HIV response in Zimbabwe

Overall: 13/23

Robustness and study design: 7/7

Costing methodology and data sources:

- Service use and resource measurement: 2/7
- Valuation and pricing: 2/4
- Analysis and presentation of results: 6/5
- Overall: 13/20

The Investment Case was written in 2020 to cover the 2020-2030 resource needs period for all interventions and populations, by MoHCC and UNAIDS. The document was designed to guide strategy development and estimate resource needs of modelled investment scenarios to inform policy. A resource needs model (RNM) called Spectrum, from the Goals set created by Avenir, was used for projections, and unit costs were identified from costing for the ZNASP IV. The costing informs the investment case development, and it is assumed to be updated every 4-5 years.

The Pharos team concluded that the IC 2.0 results and high-level approach were transparent and well-documented, and the unit costs assumptions were clear and most were traceable to sources used in the ZNASP IV costing. High scores were given for robustness of study design and purpose, but lower scores were given for presentation of the results because there was little discussion provided on the sources or accompanying biases and limitations.

#### *IV.2 Detailed assessment of vertical (intervention) documents*



## d. HIV Testing Services Strategy 2017-2020

The average score given by reviewers was: 14/20

Robustness and study design: 7/7

Costing methodology and data sources:

- Service use and resource measurement: 4/4
- Valuation and pricing : 1/4
- Analysis and presentation of results:2/5

The HIV Testing Services (HTS) Strategy was drafted in 2017 to cover the period of 2017-2020, through a collaboration between the MoHCC and CHAI. The HTS TWG conducted two stakeholder meetings and collected data from key informant interviews (KIIs). The HTS costing was done to budget for HTS programme implementation, and bottom-up costing work was done using Excel, whereby total costs were calculated by multiplying unit cost per test by the estimated population to test. Cost per test was divided into two components, commodities (specific reagents consumed by the test) and operational costs (overhead expenses incurred in order to conduct the test, such as travel expenses for community-based testing). It was unclear whether costs would be updated regularly, but they were calculated to support the HTS strategy which feeds into the multi-sectoral ZNASP. Pharos consultants concluded that the costing was strong, with assumptions well-documented, and the write-up of the methodology was among the best of the documents reviewed for strategy costing. The Excel spreadsheet clearly documented assumptions and sources for each unit cost calculation. Similar to other documents reviewed by Pharos, the HTS lost points due to lack of discussion around limitations and potential biases, and missing documentation of technical assumptions around conversion, depreciation, and inflation.

## e. Phase 2 Report: Improving the Allocative Efficiency of the HIV Response Across the Care Cascade in Zimbabwe

Overall: 15/20

Robustness and study design: 7/7

Costing methodology and data sources:

- Service use and resource measurement: 2/4
- Valuation and pricing: 2/4
- Analysis and presentation of results:4/5

The

Phase 2 Report was drafted in 2019 by the World Bank, NAC, and the Burnett Institute to evaluate financial allocations along the HIV treatment and care cascade. The MoHCC, EPGAF, and USAID were also involved in the report. The analysis was intended to inform implementation efficiency of the HIV program by evaluating different ways to maximize coverage and health impact using either existing budgets or a modelled scenario of 25% expansion in funding for treatment. The Optima model is open access and implied to be a top-down approach wherein average cost is multiplied by service delivery target, and inputted unit

cost data from sources such as the MoHCC, PSI, ITECH and others, but these sources are not well documented in the Appendices. Notably, the use of cost-coverage curves suggests that as population saturation is reached, additional spending does not lead to increased coverage and impact, implying rapidly rising marginal utility costs. This costing was used to formulate the ZNASP allocative efficiency strategy and named in the recommended approach to treatment and efficiency measures in the GFATM FR.

This was a comprehensive study that cited sources, provided some unit costs data, and had a clearly defined purpose to optimize future spending on AIDS treatment, which is the largest component of the national HIV program. It was not a costing study per se, so the costs themselves were not explicitly interrogated and assumptions were not detailed enough to easily inform other applications.

f. The Plan for Elimination of Mother to Child Transmission of HIV & Syphilis in Zimbabwe 2018-2022

Overall: 13/20

Robustness and study design: 7/7

Costing methodology and data sources:

- Service use and resource measurement: 3/4
- Valuation and pricing : 1/4
- Analysis and presentation of results:2/5

The EMTCT Plan was authored in 2017 by the MoHCC to cover the 2018-2022 resource needs period. Costing work was completed by CHAI. Costing was completed for budgeting purposes and consisted of an Excel model and a bottom-up approach with activity-based costing and unit costs multiplied by targets. Data was drawn from KIIs and the existing MoHCC EMTCT program, and the vertical program will feed into the multi-sectoral ZNASP IV. Data was drawn from the 2016 MoHCC estimates, but the document lacked sources for unit prices and explanation for how costs were derived. The analysis and presentation of results were also sparse.

g. Sustainability Transition Implementation Plan: Voluntary Medical Male Circumcision

Overall: 13/20

Robustness and study design: 7/7

Costing methodology and data sources:

- Service use and resource measurement: 4/4
- Valuation and pricing : 1/4
- Analysis and presentation of results:1/5

The VMMC Implementation plan was authored in 2018 and covers the 2019-2021 resource needs period. The MoHCC led the document creation, and CHAI conducted the technical work and costing. The plan was funded by the Bill and Melinda Gates Foundation (BMGF), and costing was designed to inform financial planning. Data was drawn from the Male Circumcision (MC) Reusable Unit Cost Overview (2018), and a bottom-up ABC approach was used in Excel. Detailed assumptions were given for the unit cost calculations, but pricing sources were not given and the analysis and presentation of results did not include limitations, potential biases, or sensitivity analyses.

#### h. Implementation Plan for HIV Pre-Exposure Prophylaxis in Zimbabwe

Overall: 13/20

Robustness and study design: 7/7

Costing methodology and data sources:

- Service use and resource measurement: 3/4
- Valuation and pricing: 2/4
- Analysis and presentation of results: 1/5

The PrEP Implementation plan was authored in 2017 by the National PrEP TWG to cover the 2018-2020 resource needs period. CHAI did the costing analyses, MoHCC led the report, and the Pangaea Zimbabwe AIDS Trust (PZAT) was another stakeholder. Costing was calculated for financial planning, and fed into the ZNASP IV. A bottom-up ABC approach was used, and units are given and open access. However, prices sources are not given, nor are sensitivity analyses conducted or limitations described.

#### i. MoHCC Health Sector Resource Mapping Report

Overall: 15/23

Robustness and study design: 6/7

Costing methodology and data sources:

- D) Service use and resource measurement: 5/7
- E) Valuation and pricing: 1/4
- F) Analysis and presentation of results: 3/5

The Health Sector Resource Mapping Report was written in 2018 by the MoHCC to retrospectively cover the 2017-2018 period. Costing was done by CHAI, and other stakeholders include the GFATM, the US government (PEPFAR and USAID), and the Health Development Fund (HDF). The purpose of this costing was economic analysis, and a top-down expenditure

(retrospective) and budget (prospective) review were conducted using an Excel-based resource needs model. This document is designed to complement the NASA and NHA, and may be used to inform financial gap analysis of high-level planning. Self-reported data was collected from programme implementers, a limitation which was mentioned in the narrative, but there was not a clear evaluation of data validity.

#### V. Detailed Unit Cost Source List

Figure 8. Primary and secondary data sources for unit costs, epidemiological assumptions, and economic assumptions in key high-level documents

Document		Secondary data sources	Primary data sources
ZNASP IV	<b>Unit costs</b>	Peer-reviewed literature GFATM grant applications TB TIME Spectrum Goals modelling tool	PEPFAR programmatic data National procurement data NASA
	<b>Epidemiological</b>	GOALS Model Spectrum GFATM grant applications Peer-reviewed literature	PEPFAR programmatic data DHS ZIMPHIA
	<b>Economic assumptions</b>		National procurement data NASA
GFATM FR	<b>Unit costs</b>	Previous GFATM Funding Requests Studies/plans on components (VMMC, EMTCT, ART, etc) carried out by CHAI and CHAI consultants, the World Bank, PEPFAR, and others Peer-reviewed literature ZNASP costing	Previous purchases/historical data GDF through Regional Technical Advisor GDF January 2020 Medicines Catalogue UNDP price list International Medical Products Price Guide
	<b>Epidemiological</b>	HIV Health Sector Strategy Previous GFATM Funding Requests ZNASP costing	
	<b>Economic assumptions</b>	ZNASP costing	
Investment Case	<b>Unit costs</b>	GOALS Spectrum Model: RNM ZNASP Costing	NASA
	<b>Epidemiological</b>	ZNASP Costing GOALS Spectrum Model: RNM	
	<b>Economic assumptions</b>	ZNASP Costing	NASA
HIV health sector plan	<b>Unit costs</b>	PSI EGPAF 2015 outputs 2015 HTS Costing sources Global Fund NFM budget 2014 CHAITWG meetings	HDF Resource Mapping exercises GFATM Product Specifications List 2015 National Health Accounts NASA MSH International Drug Price Indicator Guide National Quantification (2015) 2013 SCMS NatPharm Quantification
	<b>Epidemiological</b>	Global Fund	National Quantification (2015)
	<b>Economic assumptions</b>	National Health Accounts NASA	

Allocative efficiency analysis	<b>Unit costs</b>	2017-2020 Zimbabwe HIV testing services strategy 2017 Zimbabwe Health Financing Strategy	Elizabeth Glaser Pediatric AIDS Foundation PSI PHI 2015 Zimbabwe National Health Accounts 2014-2015 NASA
	<b>Epidemiological</b>	2017-2020 Zimbabwe HIV testing services strategy 2018 NAC Global AIDS progress report	2014 ZIMPHIA Elizabeth Glaser Pediatric AIDS Foundation
	<b>Economic assumptions</b>		2015 Zimbabwe National Health Accounts 2014-2015 NASA
HTS	<b>Unit costs</b>	Econet Global Fund 2014 Training curriculum MOHCC 2014 Feb 2015 POC Presentation March 2015 Peds TWG Meeting Global Fund NFM budget 2014 CHAI estimates EGPAF 2015	GFATM Product Specification List, 2014 Feb 2015 National Quantification Global lab reference price 2013 SCMS PSI FHI CHAI Labs Reference Price List, Nov 2014 MoHCC contracts (HR) 2015 NatPharm Quantification outputs MSH International Drug Price AAT model (2012)
	<b>Epidemiological</b>		MOH Campaign Tally Sheet EID Quantification Results PSI FHI
	<b>Economic assumptions</b>	Global Fund NFM budget 2014	