



CROWN AGENTS
ACCELERATING SELF-SUFFICIENCY & PROSPERITY

Technical Brief

VALUE FOR MONEY ASSESSMENT, HDF-RBF PROGRAMME, ZIMBABWE

ABSTRACT

Crown Agents has led the Health Development Fund - Results Based Financing (HDF-RBF) programme in Zimbabwe since 2014. By 2021, the programme had generated some clear and positive results. This included providing first antenatal care to 232,767 women and over 5.5 million postnatal growth monitoring visits each year at HDF-RBF funded facilities. Funds from the programme have also been used to construct 500 maternity waiting homes, contributing to a 50% decrease in deaths during childbirth. There has also been a 25% improvement in quality care measures across all HDF-RBF health facilities.

The HDF-RBF programme works to provide both immediate benefits in the short-term, including incentivising health facility staff to deliver high-quality care, as well as building the capacity of health facilities and strengthening systems for longer term sustainable success. HDF-RBF pay financial incentives to health facilities based on the quantity and quality of services provided to clients at 849 rural health facilities/primary health units (PHUs) and 67 selected hospitals in 42 of the 60 districts of Zimbabwe.

The HDF-RBF programme is a vital component of the broader Maternal Newborn and Child Health (MNCH) support being provided to the Ministry of Health and Child Care (MoHCC), and the results and impact of the programme are clearly substantial. Yet, to date, there has been no holistic evidence on the value for money (VfM) in implementing RBF in Zimbabwe.

A study was commissioned by the programme to conduct a comprehensive assessment on the VfM of HDF-RBF, specifically to assess whether the Crown Agent's RBF approach is efficient, effective, and cost-effective. Using a micro-costing analysis, cost-effectiveness analysis and insights from key stakeholders the conclusion reached was that the programme was **'VERY COST-EFFECTIVE'** being that the US\$990.09 per DALY averted estimate is less than the average per capita GDP in Zimbabwe in 2019 (\$1,390)¹. This VfM assessment revealed that the programme demonstrates a very good use of financial resources when taking into account the combination of cost, quality and sustainability to meet the programme needs.



BACKGROUND

Following the successful HDF-RBF pilot between 2011-2014 covering 18 districts in Zimbabwe, Crown Agents has been implementing HDF-RBF in 42 rural districts covering 849 rural health facilities and 67 hospitals over the past 8 years (2014-2022).

The programme has enabled the delivery of high impact maternal, new-born and child healthcare services that reach an estimated 6.6 million people, contributing significantly to progress on SDG3 and on achieving Universal Health Coverage in the country.

The programme is a key component of the broader Maternal Newborn and Child Health support provided to the Ministry of Health and Child Care, through UNICEF, by the Health Development Fund (HDF) donors – the EU, Sweden, Ireland, GAVI and the UK FCDO.

Working in collaboration with the MoHCC, the RBF programme has provided robust fiduciary assurance to the HDF partners as well as strengthened institutional systems and processes to increase sustainability beyond the programme's lifespan.



¹The World Health Organization's Choosing Interventions that are Cost-Effective project (WHO-CHOICE) project sets the threshold for cost-effectiveness as the cost of the intervention per disability-adjusted life-year (DALY) averted less than three times the country's annual gross domestic product (GDP) per capita. Highly cost-effective interventions are defined as meeting a threshold per DALY averted of once the annual GDP per capita (WHO, 2003) https://www.who.int/choice/publications/p_2003_generalised_cea.pdf



Health
Development Fund

**Supporting the National Health Strategy
to improve access to quality health
care in Zimbabwe**



STUDY OBJECTIVE

There is limited evidence within the global literature examining the efficiency and effectiveness of RBF in increasing health service availability and improving health outcomes, respectively. This study was commissioned to address this gap and conduct a holistic assessment on the VfM of the HDF-RBF programme in Zimbabwe and to evaluate whether the Crown Agents RBF approach is efficient, effective, and cost-effective. To provide a full picture, the study aimed to capture five key programme measures: economy, efficiency, effectiveness, equity and cost-effectiveness (4E's and CE). In addition to these, cross-cutting issues such as risk, sustainability, other players and cultural acceptability were also assessed, as they provide critical contextual information for interpreting VfM assessments.

APPROACH

The study conducted a micro-costing analysis and a cost-effectiveness analysis to evaluate the VfM of the programme. In addition, insights from key stakeholders were collected to help understand 'the 4E's and CE' and other cross-cutting issues. The analytic approach used in this assessment included cost analysis, impact modelling and estimation of the Cost per Disability Adjusted Life Years (DALYs) supplemented by qualitative data analysis for an holistic VfM evaluation of the RBF programme.

This study was carried out from the perspective of the provider (MoHCC and the funders). Multiple one-way sensitivity analysis was used to test the impact of various assumptions on the cost-effectiveness ratio (DALY and death averted), with justified upper and lower limits. Thematic analysis was used for analysis of the qualitative data generated from the study.

Ethical approval was obtained from the Health Research and Ethics Committee of the Medical Research Council of Zimbabwe and permission to conduct the study was granted by the MoHCC. The study was commissioned by Crown Agents and was led by an independent consultant.

Between 2014 and 2019 there were

14.3 million health facility consultations, an increase of approximately 647,796 consultations as compared with the previous evaluation period.



52,375 Disability-Adjusted Life Years (DALYs) and 572 deaths were averted due to the programme.

²DALYs are a time-based measure that combines years of life lost due to premature mortality (YLLs) and years of life lost due to time lived in states of less than full health, or years of healthy life lost due to disability (YLDs) (WHO 2022) <https://www.who.int/data/gho/indicator-metadata-registry/imr-details/158>

SUMMARY OF RESULTS

Using the WHO-CHOICE's GDP-based cost-effectiveness threshold, the conclusion reached was that the programme was 'VERY COST-EFFECTIVE' being that the US\$990.09 per DALY averted estimate is less than the average per capita GDP in Zimbabwe in 2019 (\$1,390).

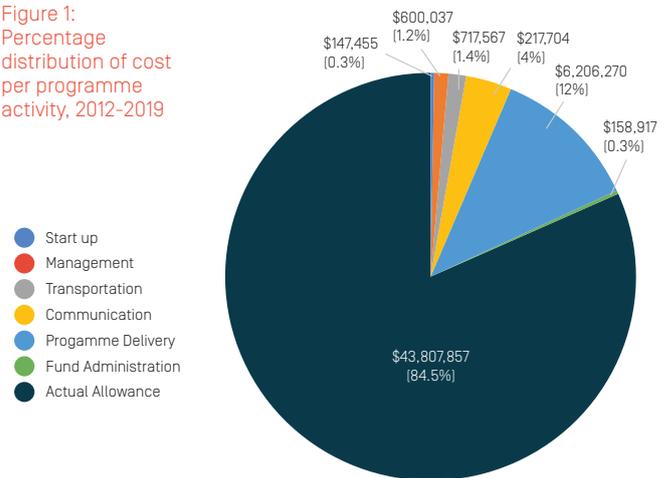
Economy

Detailed cost analysis using a micro-costing (bottom-up) approach was conducted to analyse the cost data. Major cost drivers were identified, and the total cost was disaggregated by budget categories and programme activities.

From 2014 to 2019, the total cost of starting up and implementing the HDF-RBF programme was US\$51,855,807.

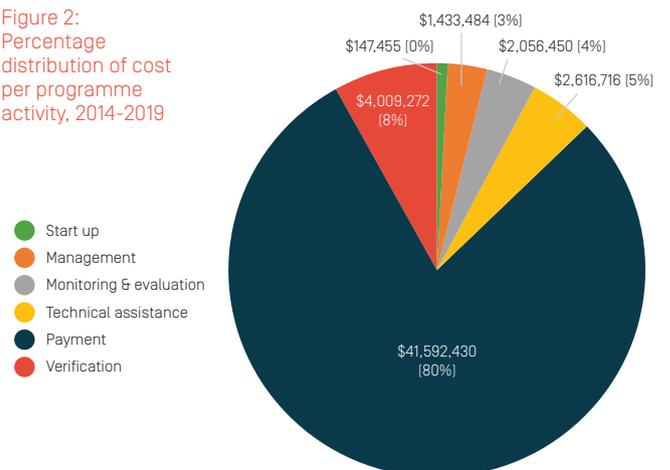
When disaggregated by budget categories, the largest proportion of the cost was spent on incentives to health facilities/ programme delivery (84.5%). This was followed by programme delivery (including, quality assurance, oversight and M&E) (12.0%), transportation (1.4%), management (1.2%), communication (0.4%) and fund administration and start-up (0.3% each), see Figure 1.

Figure 1: Percentage distribution of cost per programme activity, 2012-2019



When disaggregated by programme activities, the largest proportion of the cost was spent on recurrent pay-for-performance of health-workers (80.2%). This cost was followed by the cost paid for verification (7.7%), technical assistance (5.1%), monitoring and evaluation (M&E) (4.0%), general management (2.8%) and start-up (0.3%), see Figure 2.

Figure 2: Percentage distribution of cost per programme activity, 2014-2019



Efficiency and Cost-Efficiency

Using evidence from the impact evaluation of the pilot RBF programme, the number of service outputs attributable to the HDF-RBF programme was estimated. This attributable number of service outputs were then compared with the total cost of programme implementation to estimate cost-efficiency.

There were 14,371,547 health facility consultations conducted and verified on HDF-RBF from Q2 2014 to Q4 2019. Using effect parameters from a previous impact evaluation of HDF-RBF in 2016, to estimate how this number compares to what would have happened in the five years preceding RBF, an estimated 647,796 additional health facility consultations were achieved as a result of the programme implementation. The service with the highest number of additional health facility consultations provided was short-term family planning (402,168), followed by postnatal care (PNC) (78,024) and delivery with the support of a skilled birth attendant (63,318).



Table 1: Actual RBF programme outputs (2014-2019) with estimated pre-RBF outputs (2010-2014)

Service provided	End line	Effect	Estimated baseline	Difference
Antenatal Care 4	832,641	0.02	815,988	16,653
Antenatal Care 1	380,436	0.02	372,827	7,609
People living with HIV tested	643,440	0.004	640,866	2,574
Anti-retroviral therapy	44,245	0.04	42,475	1,770
Intermittent preventive treatment	412,927	0.04	396,410	16,517
Delivery	487,061	0.13	423,743	63,318
Complicated delivery: PPH*				3,166
Complicated delivery: Eclampsia*				3,166
Complicated delivery: Abortion*				1,266
Postnatal care	600,181	0.13	522,157	78,024
Family planning - short-term	8,043,362	0.05	7,641,194	402,168
Family planning - long-term	271,385	0.05	257,816	13,569
Expanded programme on immunisation	510,890	0.003	509,357	1,533
Vitamin A supplement	2,144,979	0.017	2,108,514	36,465
				647,796

*Number of complications was estimated from the number of deliveries

Health workers also report observing a significant increase in clients utilization of health facilities and services as a result of the HDF-RBF programme. One nurse, who has worked in a particular facility for eight years, noted that **“more mothers are coming for delivery.”**

The HDF-RBF Programme currently operated in

 **67** HOSPITALS ACROSS THE COUNTRY
  **42** RURAL DISTRICTS COVERING A TOTAL OF
  **849** RURAL HEALTH FACILITIES
  **6.6M** PEOPLE ARE ESTIMATED TO HAVE BEEN SERVED

Effectiveness and Cost-Effectiveness

Based on the available outcome level data (maternal health service utilisation), a Cost Effectiveness Analysis was used to estimate the impact of the HDF-RBF programme on target indicators.

In the base case scenario, 52,375 DALYs and 572 deaths were averted due to the HDF-RBF programme. Using the WHO-CHOICE's GDP-based cost-effectiveness threshold, the conclusion reached was that the programme was 'very cost-effective' being that the US\$ 990.09 per DALY averted estimate is less than the average per capita GDP in Zimbabwe in 2019 (\$1,390 [£1,025]).

Using confidence interval values around estimates of the different parameters in the model (cost [+/-5%], the difference in outputs with v. without HDF-RBF [+/-20%], and programme effect on outcomes (as estimated), the Incremental Cost-Effectiveness Ratio (ICER) was recalculated under various scenarios. The sensitivity analysis using the actual cost of implementation (\$51,855,807) showed that only in the most pessimistic scenario [-20% difference in outputs with or without HDF-RBF] is the programme not deemed very cost-effective. However, it remains cost-effective, as it is below three times the average GDP per capita in Zimbabwe based on the 2019 value (\$4,170 [£3,075]).

Comparing the total programme implementation cost [**\$51,855,807**] with the estimated DALYs and deaths averted in the base scenario, the ICER was estimated at **\$990.09** per DALY averted.

ICER = Total RBF implementation cost/Total DALYs averted

= US\$51,855,807/52,375 DALYs averted

= US\$990.09/DALY averted [£742.60/ DALY averted]



Table 2: Sensitivity analysis around ICER based on the actual expenditure of the HDF-RBF programme

Scenario	Actual estimate	Lower limit	Upper limit
Base case scenario			
DALY's averted	52,375	42,474	62,243
ICER	\$990.09/DALY averted	\$1,220.87/DALY averted	\$833.12/DALY averted
Most pessimistic [Minimum difference] scenario			
DALY's averted	41,900	33,980	49,794
ICER	\$1,237.61/DALY averted	\$1,526.09/DALY averted	\$1,041.40/DALY averted
Most pessimistic [Maximum difference] scenario			
DALY's averted	62,850	50,969	74,691
ICER	\$825.07/DALY averted	\$1,017.39/DALY averted	\$694.27/DALY averted

Engagement with different programme stakeholders revealed multiple intended successes that occurred due to the HDF-RBF programme, including increased service utilisation and improvements in maternal outcomes, which support the quantitative results showing utilization of services.

Stakeholders also reported improvements in quality of care and health care infrastructure in the country. HDF-RBF funds have been used for a wide variety functions, including building patient waiting areas, wards, and accommodation for health workers to ensure they can live within the health facility premises and solar systems to power some essential equipment. Funds have also been used to drill boreholes alleviating perennial water crisis that affects some clinics.

Beyond infrastructural development, facilities have utilised HDF-RBF funds to procure medicines, medical supplies,

equipment and furniture as well as subsidizing some of the care provision costs, ensuring that facilities can support clients in minimising out of pocket costs. Even during the ongoing pandemic, the HDF-RBF funds have been effectively utilised to support the Covid-19 response, through the purchase of personal protective equipment.

Moreover, as a result of HDF-RBF's incentives, health workers at facilities reported that they had been motivated to ensure that they achieve the highest possible quality of care. Health workers, irrespective of the facility-type, stated that the HDF-RBF programme's incentives motivate them to work better. Supervisors agreed that the incentives motivate health workers, with one facility-in-charge saying that it "pushes health workers to input more to achieve positive results".

³ An incremental cost-effectiveness ratio is a summary measure representing the economic value of an intervention, compared with an alternative [comparator]

OTHER CROSS-CUTTING VFM ISSUES

For **CULTURAL ACCEPTABILITY**, there is a process of community engagement to ensure programme acceptability and sustainability. This is one of the roles of the Health Centre Committees with a member describing their role as “the go-between from the clinic and the community. We take the grievances from the community to the clinic and the clinic to the community. We discuss what we can do during our meetings.”

This helps to guarantee a high level of community participation, which is encouraged on the programme to ensure community ownership and empowerment.

To minimise the risk of fund mismanagement, multiple strategies are embedded within the programme.

For some small items, facilities are allowed to purchase them without cascading it to the district level, but they still need to follow a defined procurement process. With larger purchases, the district is involved. There were no major reports of procurement irregularities from the assessment.

OTHER PLAYERS (funders) continue to make contributions to some of the outcomes reported at the facilities. These include the Global Fund, President’s Emergency Plan for AIDS Relief who also installed solar panels in some health facilities while other NGOs support HIV programming. Others mentioned include the Norwegian embassy, Solidamed, Plan Zimbabwe and USAID/FHI 360.

For **SCALABILITY**, the programme has already been institutionalised and scaled up nationally.

Regarding **SUSTAINABILITY**, there is government willingness to sustain the programme and its gains.

The challenge with funding remains as the macroeconomic environment may limit the government’s ability to fulfil its desired intention. There is a clear recognition of the need for continued donor support with continued and possibly increasing government ownership.



Key Recommendations

To further increase VfM of the programme, consideration should be given to:

- developing and implementing a synergistic or centralised procurement protocol at a district level for facilities to minimise the cost incurred by the individual facilities in negotiations and travel to Harare for such procurements.
- applying more innovative cost savings approaches for example, leveraging technology to deliver remote training where possible, to improve cost efficiency while avoiding cost cutting measures which may compromise achievement of programme deliverables
- addressing issues raised by health workers, especially those at the lower-level facilities, is the perceived increased workload as well as the disgruntlement of health workers in higher-level facilities. Both can affect the performance outcomes achieved on the programme. The Zimbabwe health services referral system should always be followed to ensure demand and supply side issues are under control.



A significant reduction in maternal and neonatal deaths by financially rewarding the hospital for improved performance in maternity services

An increase of skilled birth attendance

All time presence/ availability of all required cadres involved in maternity services

Improved quality of service in maternity wards



CONCLUSION

In conclusion, HDF-RBF in Zimbabwe has been widely seen as a successful example of how to utilise performance incentives effectively to drive availability and quality of services. This VfM assessment has provided the evidence demonstrating that the programme is very cost-effective and demonstrates a very good use of financial resources to meet the programme needs, particularly when considering the combination of cost, quality and sustainability.

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