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Impact assessment of the Zimbabwe Health Worker Retention Scheme

Final Report

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with additional help from CCORE

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HEALTH SERVICE BOARD
"Pulling Together For Health"

PRIMARY HEALTH CARE
A HEALTHY NATION
MINISTRY OF HEALTH & CHILD WELFARE
ZIMBABWE

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Executive summary

Terms of Reference
This assessment of the impact of the Zimbabwe Harmonised Health Worker Retention Scheme (HHWRS) was done by Marjolein Dieleman (international HR specialist) Mark Watson (international economist) and Chenjerai Sisimayi (national biostatistician) in August and September 2011. A qualitative study to inform the assessment on the perceptions from health workers, managers and clients was implemented by CCORE. The Terms of Reference were to:

- "Assess the relevance, efficiency, effectiveness, sustainability and impact of the national health worker retention scheme, according to OECD DAC evaluation guidance; and,
- Provide a comprehensive analysis of potential options for the retention scheme, with clear recommendations for preferred options going forward

This is the final report, and includes the assessment and the qualitative study on perceptions of health workers, their managers and clients on the scheme and its effects.

Background
Zimbabwe has experienced an unprecedented decline in health service provision, exacerbated by the exodus of skilled health workers, in particular from the public sector. Low staffing levels, together with limited access to facilities, poor infrastructure, inadequate drug supplies and fees have impacted adversely on health outcomes in Zimbabwe.

The Harmonised Health Worker Retention Scheme
After an emergency response in 2008, the HHWRS was set up in 2009 by government and development partners[1]. The goal was to reverse the emigration of health staff, and ensure there were enough newly trained health workers entering the system to fill the emerging staff vacancies. Total funding to date has been US$70m (Global Fund 65%, DFID 19%, others 16%).

The scheme provides a tax-free salary top-up to health workers, paid on a monthly basis, conditional on attendance at work (or on authorised leave). The top-up is dependent on grade and location of work. It has been subject to modification over time (lower grade cadres and city council health workers no longer receive the top-up). Since 2011, it is administered independently of the MoHCW by the Health Service Board, previously this was done by Crown Agents. GF and GoZ have agreed that the scheme will be phased out by the end of 2013, with the first (25%) reduction in funding in January 2011. It was envisaged that corresponding increases in salaries paid by the government will make up the shortfall.

Approach and methodology of the impact assessment
The approach, agreed with Health Service Board, MOHCW and DFID, is based on the evaluation framework for retention interventions developed by WHO (2010). The entry point is the intervention logic of the retention scheme - that increased salaries (financial incentives) will increase the number of health workers present in health

[1] Principal partners are Global Fund, European Commission, Expanded Support Programme on HIV/AIDS (ESP), DfID, UNICEF, WHO and UNFPA

facilities, thereby improving access to health services, and subsequently increasing utilisation. The team focused the analysis on critical cadres - doctors, nurses, environmental health technicians (EHT), and laboratory and pharmacy personnel.

Key findings

- A great deal of data has been collected and analysed, and some clear patterns have emerged. But the results should be interpreted with caution - the data available was limited, and had not been designed to measure the scheme's impact. There were inconsistencies between HHWRS staff returns and HSB employment sources. (Vacancy rates have fallen for all cadres since 2008: the biggest reductions were for nurses (31% to 14%), and pharmacists (53% to 25%) ; unfortunate that it did not come out at findings level as it is a fact
- Vacancy rates remain high for doctors, environmental health workers and laboratory personnel, at 52%, 53% and 50% respectively;
- Overall vacancy rates are higher in the public sector (17.9%) than in mission facilities (8.3%); this also applies to cadres C5 and above.
- The density of doctor and nurses in the public sector in Zimbabwe remains low compared to WHO standards and that of neighbouring countries.
- There is a significant variation in vacancy rates of critical cadres in the governmental health services between provinces, with some having a surplus while others (in particular Masvingo) have high vacancy levels
- Delays in channeling funds to Crown Agents resulted in health workers not getting their monthly top-ups on time on 23 occasions. (this has since improved with payments lagging by a month)

Impact of HHWRS

Three areas of service delivery were investigated as proxies for impact: outpatient attendance (doctors and nurses); skilled deliveries (nurses); and HIV patients initiated on ART treatment (doctors, nurses and laboratory personnel).

Outpatient attendance

In the period 2008- June 2011, Outpatient attendance fell, except in Harare. The findings suggest that although more health workers were coming to work, this did not automatically lead to increased utilisation. Other factors will have contributed, such as the cholera epidemic which boosted attendance when the scheme was starting.

Skilled birth attendance

Facility-based births have increased from 53% to 76% of all births between 2008 and 2011. This occurred at the same time as a reduction in vacancy rates for nurses. Other factors are likely to be of influence, and some of the provincial data is contradictory, but statistical analysis of the limited data available suggests that the rise in institutional deliveries can be explained, at least in part, by more nurses being available in the facilities.

ART

The rate of ART initiation in the health sector has increased steadily in recent years. However the findings demonstrated little or no association between ART Initiation and vacancy rates for doctors, nurses and laboratory personnel.

These findings suggest that the HHWRS has had some impact, but demonstrate that it is very difficult to relate utilization of services to the scheme. The presence of critical cadres is essential, but not sufficient to ensure that patients are increasing utilization of services.

Funding

Global Fund Rd 8 funds are not adequate to cover all the top-ups because health worker numbers on the scheme have increased. The Global Fund put a cap on the number of Health workers to benefit from the retention scheme at 18860 per month and on the amount to be spent (USD1 800 000). This, together with the 2010 recruitment freeze, may result in newly qualified health workers being unable to find work. Phasing out the HHRWS requires that government increases health worker salaries; this will not be achieved without significant additional funding. The July 2011 remuneration increases are likely to exacerbate the problem. Personal emoluments are already crowding out non-wage and capital expenditures at the MOHCW, and significant arrears are building up - utility bills are not being paid, there are shortages of consumables, and equipment is not being maintained

Value for Money

Three areas of management and administrative costs were considered: Crown Agents (CA) as paying agent; UNDP providing programme management services to the Global Fund; and Global Fund (central and local (LFA) costs).

CA costs comprise management and banking charges and have averaged less than 5%. Given the challenging circumstances, this represents very good VfM for DFID funding, especially as they included the cost of verification spot-checks by CA. This responsibility has now passed to HSB (as the Sub Recipient), which has recruited auditors for the purpose.

UNDP, contracted by the GF, imposes a 7% management charge on the GF HWRS contributions and also recovers an additional 3% to pay for posts in its Programme Management Unit (PMU). These charges are additional to CA charges and GF central management and what PwC charges GF as its LFA. Global Fund management costs are not publicly available but this report estimates that in total they are in the range of 15%-18% for support to the HHWRS. DFID gave the Global Fund high scores for VfM in its 2010 Multilateral Aid Review, but we question whether GF support for HHWRS represents good VfM for DFID, as a major contributor. Total costs are high when compared to the costs of trust funds operating in fragile states.

The use of parallel systems, whilst necessary in this context, tends to increase costs, though there may have been benefits in fiduciary risk management and oversight.

Perceptions of the scheme

Notwithstanding that the HHWRS positively impacted in reducing vacancies and improving morale in the early stages of the scheme, findings from the qualitative study showed that there is an underlying sense of anxiety about its future. This has been precipitated by several issues. Although the scheme is still widely perceived as helpful, the value of the incentive in a climate of increasing inflation is in some doubt. Compounding this concern is the issue of delays and unpredictability of disbursements and the high costs of access and transaction, particularly in rural remote settings. Timeliness of payments has recently improved. There is also uncertainty about the sustainability of the scheme especially given the recent introduction of the HHWRS 25% “phased down” approach by GFATM and proposed incremental support by government to the HHWRS by 2015. These concerns and perceptions have it seems, been compounded by a lack of information which has not seamlessly cascaded to every cadre level or health facility, particularly in rural areas.

Conclusions

The scheme has been an important contributing factor in the reduction of vacancies, particularly for nurses. But improving service utilization requires overall health system strengthening. Withdrawal of the HHWRS, as envisaged under the Global Fund/GoZ agreement, is likely to lead to a significant deterioration in service provision, because the proposed public sector remuneration increases are likely to prove unaffordable.

Recommendations

- The HHWRS should be extended by two (or preferably three) years. The phased reduction in funding, as envisaged by the Global Fund/GoZ Agreement, although rational, is happening too soon.
- The extension of the HHWRS should be on the basis of a "compact" which would represent a contractual agreement to move to proper needs-based planning within the sector, to optimize resources in an environment where financial constraints will continue to be tight for the foreseeable future, and where health outcomes need to be improved.
- The HHWRS extension should be embedded in realistic sector financing plans, encompassing employment (PE), non-wage and capital expenditure elements. This would require a Medium Term Expenditure Framework (MTEF) functioning at sector or national levels, and an appropriate balance between the key elements of expenditure so that service delivery can be optimized.
- The HHWRS needs to be embedded in a strategic vision on retention, developed by the HRH taskforce, and include additional retention strategies in the area of education, regulatory interventions, and/or personal and professional support.
- The scheme should address provincial variations in vacancy rates and variations between cadres
- Selection of retention strategies options needs to be done in consultation with different stakeholders to allow success and avoid resistance and any changes should be clearly communicated at all levels in the health system.
- HRH data bases should be improved and harmonised

Preliminary estimates of initial costs are appended in the report.

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The team would like to thank the Health Service Board and the MOHCW for their openness and participation throughout the mission. We would like to than Jane Mudyara in particular for her collaboration. Thanks go to DFID Harare and to UNDP for facilitating this mission and to the Health Services Board and Crown Agents for facilitating access to data and to people. We would also like to acknowledge the people met in Concession district hospital, Howard hospital and Tsungubi clinic during our field visit. We also acknowledge the WHO country office and WHO headquarters support for the study.

Abbreviations

ART	Anti-retroviral Therapy
CA	Crown Agents
CC	Critical cadres
CCM	Country Coordinating Mechanism
CCORE	Collaborating Centre for Operational Research & Evaluation
DSA	Daily Subsistence Allowances
EHT	Environmental Health Technicians
ESP	Expanded Support Programme on HIV/AIDS
GF	Global Fund (to fight AIDS, TB and Malaria)
GOZ	Government of Zimbabwe
HHWRS	Harmonised Health Worker Retention Scheme
HRH	Human Resources for Health
HSB	Health Service Board
HSS	Health Systems Strengthening
ILB	Institutional Live Births
LFA	Local Fund Agent (of the Global Fund)
MOHCW	Ministry of Health and Child Welfare
MoF	Ministry of Finance
MTEF	Medium Term Expenditure Framework
PCN	Primary Care Nurse
PE	Personal Emoluments
PMU	Project Management Unit
PWC	Price Waterhouse and Coopers
RDC	Rural District Council
ToR	Terms of Reference
VHSSP	Vital Health Services Support Programme
VfM	Value for Money

1. Introduction

1.1 Terms of Reference

The Terms of Reference (ToR, see Annex 1) note that '*Zimbabwe has experienced an unprecedented decline in health service delivery due to the mass exodus of skilled workforce in particular from the public health sector…In response, the Health Service Board (HSB) and the Ministry of Health and Child Welfare (MOHCW) and some funding partners instituted the "Health Worker Retention Scheme" in 2009. The goal of the retention scheme was to reverse the outward migration of health staff from the country; and ensure that new trainees entering the system from the clinical training schools are larger than the numbers leaving the sector. While the MOHCW and key stakeholders attest that the Health Retention Scheme has been vital to health delivery in Zimbabwe there has been no health impact assessment that critically analyzes and tracks the investments made to the scheme, the total numbers of human resources supported, the impact of the scheme on health outcomes, sustainability of the current scheme and a proposed exit strategy that the Government of Zimbabwe will adopt if external support is no longer available*'.

The main objective of the impact assessment was:
"To assess the impact of the harmonized health worker retention scheme (HHWRS) to date and to provide recommendations for the way forward".

Specifically, the assessment had to:

- *"Assess the relevance, efficiency, effectiveness, sustainability and impact of the national health worker retention scheme, according to OECD DAC evaluation guidance; and,*
- *Provide a comprehensive analysis of potential options for the retention scheme, with clear recommendations for preferred options going forward".*

A team of three consultants, two international (an HRH specialist and an economist) and one local (a bio-statistician) worked in Zimbabwe from August 21- September 3, 2011. A local collaborative research centre[2] was commissioned to design and conduct a qualitative study during September, to prove insights into the perceptions of health workers and their managers on the retention scheme. This report combines the results of the assessment and the qualitative study.

1.2 Approach to the impact assessment

The approach to the impact assessment is based on the evaluation framework for retention interventions developed by WHO (2010) and agreed upon with HSB, MOHCW and DFID. A number of specific questions for each of the criteria were formulated in the ToRs by HSB, MOHCW and development partners. In consultation with DFID and other stakeholders these questions were amended to reflect the availability of data and to fit with the theory of change adopted for this assignment.

The entry point is the intervention logic of the retention scheme: that payment of salary top-ups (financial incentives) will increase the number of health workers present in health facilities. The team focused its analysis on critical cadres: doctors, nurses, environmental health technicians (EHT), laboratory personnel and pharmacy personnel. These cadres were selected jointly with HSB, MOHCW and DFID.

[2] The Collaborating Centre for Operational Research & Evaluation (CCORE)

Changes in vacancy rates, utilisation of services and performance of health service delivery cannot be attributed to the retention intervention alone[3] although it is evident that such interventions will contribute to positive changes in the health workforce situation. Contextual factors can have a strong influence on the results and should therefore be taken into consideration as either strengthening or weakening the results of the intervention (see table 1). In the context of Zimbabwe and given the relatively brief period that the retention scheme has been in existence the most feasible approach to measure the impact of the retention scheme is at the level of utilisation of services provided by critical cadres. In a systems approach this is the outcome level (refer to table1).

Table 1: Theory of change of the retention scheme (from WHO)

System's elements	Intervention components and expected results	Crucial contextual factors of influence on results of the scheme	Indicators
Input	- Disbursed financial resources from development partners - Organisational structure to handle payments	-Banks willing to accept Foreign Accounts -Predictable funding in the time span of the retention scheme	
Process (or: the implemented intervention)	Monthly payment of financial incentives	-Payment not delayed; -Adequate verification of health worker attendance	-No of CC paid during the scheme -Trends over time in payment and cadres
Output	Increased number of critical cadres returning to work (or present in health facilities)	-Socio-economic and political situation has not dramatically changed	-Vacancy rates overall & of critical cadres (in relation to establishment) -Trends in vacancy rates Dec 2008- May 2011 for CC, overall and per province
Outcome	Increased utilisation of services provided by CC	-User fees and transport costs at acceptable level -Medicine & equipment available -Attitudes of health workers acceptable -Community expects services to work -Referral chain functional	-No of outpatient attendance -No of institutional deliveries -No of people initiated on ART treatment
Impact	Improved health service performance: Cured patients	-CC provide quality care under safe working conditions -Patients adhere to treatment -Medicine are safe -Socio-economic and political context does not change	

Details on definitions, and questions in the ToR for each of the DAC criteria are provided in Annex 2.

[3] See WHO Global Policy Recommendations to "*Increase Access to Health Workers in Remote and Rural Areas through Improved Retention*", 2010)

1.3 Methodology

The main methods used were data compilation and analysis of databases on staff returns and payment schemes, interviews with key stakeholders at national level, interviews with health workers and managers in two districts in the provinces of Mashonaland West and two districts in Matabeleland North (qualitative study, implemented between 11 and 24 September 2011)[4] and document review on policies, strategies, conducted studies and minutes of meetings. Annex 3 presents the methodology used to extract data from existing data bases. Annex 4 includes an overview of the people met during the mission.

1.4 Limitations in data collection

Data collection during the assessment faced some problems as data reliability remains an issue. Past evaluations have demonstrated that MoHCW employment records have been of variable quality, making it very difficult to obtain a comprehensive overview of the current staffing situation (Wheeler, 2010; Ahmat, 2009). Data on training enrolment and outputs, on characteristics of the workforce in terms of gender and age and turnover rates are not readily available and have to be compiled from different departments. In addition, databases show differences in data e.g. over time, making it difficult to get a comprehensive picture. Moreover, public and mission/ council data are stored in different databases, the private sector is not included in the data collection and there is a mismatch between the data base on retention and the databases on staff returns: the retention data base includes all health workers in grade C5 and above, whereas the MoHCW staff returns separate Government from Mission and Council employees and includes all health workers. Lastly, there is no baseline on vacancy rates at provincial level at the start of the retention scheme as data have only been kept from December 2010 onwards and data are only available at national level.

The qualitative study had some limitations as challenges were faced to hold focus group discussions in the community and they had to be organised at the premises of the health facilities. This might have created some bias.

It should be noted that the health cadre establishment was last reviewed in 1980 and is now outdated as there have been increases in the disease burden and population. The establishment was reviewed in 2007, but did not make meaningful changes as there were too many vacant posts arising from the poor economic environment. Changes in disease burden, population demographics, health plans, technology, and service delivery models require health workforce adaptations, both in number and in type of health workers required. Moreover, the establishment seems to differ between faith-based and public facilities, which could impact on equity. As no other data are available this 1980 (reviewed in 2007) establishment has been used throughout the document to establish the results of the retention scheme.

We understand that record keeping has improved, but it is not clear that these improvements have been made to past records. Data reliability and the lack of a clear baseline make the credibility of time-series data doubtful. Therefore the findings should be interpreted as indicative - they do not necessarily provide an accurate reflection of the actual changes that have occurred.

2. Background

2.1 Overview of Zimbabwe's health status and health services

Zimbabwe has an estimated population of 12.12 million people, of which 65% live in rural areas (MOHCW, 2010a). The country has suffered from serious economic decline, although the situation has improved since the dollarization of the economy in 2009. The current Gross Domestic Product per capita stands at 392 USD in 2008 (ibid). In 2010, 12.7% of the total budget was allocated to health by the government (ibid). Health indicators overall are poor as shown in table 2.

Table 2: Basic Health indicators

HIV prevalence	13.7% for age-group 15-49 years
TB notification rate	434 out of 100,000
IMR	57 per 1,000 live births (DHS 2010-2011)
<5 MR	84 per 1,000 live births (DHS 2010-2011)
Children <5 yrs, stunting	35%
MMR	725 per 100,000 births (ZMPMS, 2007)
Crude death rate	20
Life expectancy at birth	43 (in 2005/2006)

Sources: National Health Strategy for Zimbabwe 2009- 2013, MIMS 2009, DHS 2010-2011, ZMPMS 2007

Health services in Zimbabwe are provided by public, private, faith-based and council health facilities; the public sector covers 65% of services (see for detailed structure explanation MOHCW 2010b). Nearly 35% of the national and 65% of the rural bed capacity is provided by mission facilities (HSB/MOHCW, 2008). Access to services is a challenge in many districts, and often people have to travel more than 10km to reach a functional health facility, and outreach services are weak (MOHCW, 2010b)[5]. User fees also constitute an obstacle to utilization of services (ibid) and charges vary greatly between levels of care, between locations and even between facilities (Osika et al, 2010).

2.2 The health workforce and efforts to address HRH issues

According to MOHCW (MOHCW Staff returns, May 2011), Zimbabwe has, overall, 36,477 health workers working in the public, mission and council facilities, including management and support staff. This number is set against an establishment of 43,254 posts, showing an overall vacancy rate of 16% in 2011. Since June 2010, the Ministry of Finance (MOF) has put a cap on employing new staff and recruitment has been frozen. This means that when health workers leave their post they cannot be replaced, unless approval is obtained by the HSB from MOF. Approval is requested on a case-to-case basis, often takes 4-5 months per facility, and is not assured. The employment freeze leads to a workforce shortage on the one hand and a surplus of trained health cadres who are not able to work on the other hand.

[5] As the economic situation has improved since 2008, facilities have been re-opened and health workers have received improved remuneration, access to care may have improved. A study on access to care will be implemented between October- December 2011, giving more updated information

Health workers in post face service provision problems, due to poor infrastructure and equipment, low salaries, limited supervision and Human Resource Management capacity. The supply of medicines overall has improved from January 2009 to December 2010. In the period October- December 2010, from a sample of 1,300 health centers, 99% had at least 50% of essential medicine in stock and 6% had stock outs of vaccines. This is a large improvement compared to the period May- July 2009, when 56% of facilities had less than 50% of essential medicines and 30% had stock outs of vaccines (VAMHS, 2009).

In-service training courses and workshops are regularly organised for different cadres on a variety of topics. The payment of per diems/daily subsistence allowances (DSA) for attending these is particularly significant in the remuneration packages of low-paid health workers. Whilst in-service training is essential, attendance at training courses reduces health worker availability at the point of service delivery and may impact on availability and quality of service delivery. Many of these benefits are distributed by cadre, and/or specialism. Access to courses varies across disciplines, cadres and geographic location.

MOHCW has an active HRH department, which collaborates closely with HSB. MOHCW and HSB have developed, in consultation with the various stakeholders, a comprehensive HRH policy, which was approved (MOHCW/HSB, 2009) and is a follow up of the Reviewed Short-term Human Resources Retention Policy. Retention policy measures in the HRH policy address in general terms: remuneration and other incentives; harmonization of retention packages among partners; staff motivation; a reward system based on scientific grading; and improvement of working conditions. The directorate also has drafted a strategic HR plan 2010-2014 that is in the process of being approved (MOHCW/HSB, 2011). In this plan 2010-2014, activities in relation to retention focus mainly on incentives, protection at the workplace and improvement of living conditions. More specifically, they focus on: provision of housing and loan schemes for housing; allowances (transport, housing and rural); competitive salaries; implementation of HIV workplace policies and protective clothing; guidelines for tax exemption and other incentives and subsidized medical costs.
Current remuneration for health workers paid by the government includes a basic salary according to grade, a housing and a transport allowance. Most critical cadres also get at least one health sector specific allowance, such as night duty allowance, on call allowance, uniform allowance, rural allowance, psychiatric allowance, residence allowance for junior doctors and representation allowance for deputy directors and others in the same grade.

Efforts are underway to establish a Zimbabwean Health Workforce Observatory to allow monitoring and evaluation of the HR situation and of HRH interventions (Ahmat, 2009); an HRH profile has been developed (MOHCW, 2010b) and studies have been conducted regarding the current situation of the workforce (Wheeler, 2010; van den Broek, 2010).

2.3 Retention efforts

Current retention efforts implemented by the government constitute a bonding scheme for newly graduated health workers such as doctors and nurses which requires graduates to work for a set period of time according to the number of years of training, e.g. nurse training takes three years and nurse graduates are required to work for three years before they receive their certificate. Doctors are only required to

complete one year of bonding if working in district hospitals. These graduates also benefit from the HHWRS under review. In addition, all staff receive a transport allowance and a housing allowance (flat rates added to salaries and according to grades) and in-kind benefits (accommodation in some circumstances). Medical doctors have an opportunity for duty exemption on vehicle imports and there has been a one-off scheme to provide vehicles for senior staff through the Reserve Bank of Zimbabwe. Additionally, MOHCW has included in its strategic plan the development of systems to increase staff productivity, through a Results Based Management System (MOHCW, 2009). With support from CDC MOHCW has introduced training for district health managers on health management and leadership, thus aiming to improve management at facility level, contributing to improved health worker morale. By August 2011, 29 of the 62 district managers had been trained.

Prior to the harmonized health worker retention scheme, some donors have implemented schemes for specific of cadres:

- Global Fund paid salaries for 44 doctors in its 22 districts.

- From December 2007- December 2008 the Vital Health Services Support Programme (VHSSP) paid 184 district health executives in 24 district/mission hospitals a salary top-up ranging from 133 USD to 850 USD (VHSSP, 2009). The District Health Executives signed a performance agreement with MOHCW whereby they agreed not to practice privately or do locum work, unless authorized by the Permanent Secretary (VHSSP, 2009).

- The Expanded Support Programme paid salary top ups to District Health Executives in the districts it supported prior to harmonization of the HWRS.

- From January to March 2009, in line with the introduction of HHRWS, top-ups were to be paid for all health workers (see the MoHCW emergency HRH retention policy 2008) but limited to 21 districts. The number of people paid by VHSSP increased to 5,000 and (contrary to the HHWRS policy), VHSSP paid lower grades 30 USD/ month up to May 2009.

3. Harmonised Health Worker Retention Scheme (HHWRS)

The Harmonised Health Worker Retention Scheme (HHWRS) objectives are to reverse the outward migration of health staff from the country; and to ensure that numbers of new trainees entering the system from the clinical training schools exceed those leaving the sector. The scheme entails a tax free allowance (or salary top-up) paid to health workers on a monthly basis, conditional upon their presence at work. The amount paid depends on the grade and the location of work (urban or rural). Health workers are not paid for days they are absent from work, unless it is authorised, for example, for attendance at training courses.

The HRH Taskforce discussed and agreed on the retention scheme. Although there is not an explicit record of the intervention logic underlying the scheme, our discussions with various stakeholders confirmed that the logic was that payment of incentives would lead to an increased number of health workers providing services. No systematic monitoring of this impact was set up - the only monitoring of the HHWRS is though the payment system run by Crown Agents (CA).

Monitoring of workplace attendance of health workers is through spot-checks by CA. The spot-check process was refined during the course of the HHWRS. In essence it means that a person comes unexpectedly to a health facility, notes who is present and verifies records of health worker attendance. In agreement with MoHCW, HSB and development partners, the scheme has been designed such that as salaries increase, the retention allowance will decrease.

The HHWRS was set up by the HRH Task Force, a joint initiative between MOHCW, HSB, College for Health Science, Harare City Council and various development partners. The main partners are the Global Fund, European Commission, Expanded Support Programme on HIV/AIDS (ESP), DfID, UNICEF, WHO and UNFPA. Development partners (DFID, ESP, UNICEF, VHSSP, UNFPA and GF) fund the entire scheme. It is embedded in a national policy and is described in the emergency short term HRH retention policy of December 2008 (MOHCW, 2008) and the reviewed short-term HRH Retention Policy of April 2009 (MOHCW, 2009). The scheme replaced individual donor initiatives in selected districts (VHSSP, GF) to ensure a concerted effort aimed at a more equitable system. The HRH Task Force regularly met in 2008 (3 times) and 2009 (6 times); the retention scheme was included in the discussions in all the meetings. When the Global Fund took over the funding of the scheme, discussions on the retention scheme took place at the meetings of the Health Systems Strengthening (HSS) Committee of the Country Coordinating Mechanism (CCM). Although understandable from a GF- perspective, the consequence was that the HRH taskforce meetings were not organised and the opportunity to discuss the scheme from a comprehensive HRH perspective was missed.

The HRH Task Force stressed, in their meeting in February 2009, the importance of clear and accurate communication about the scheme to the health workers (Taskforce Minutes HRH, February 2009). Funded by DFID, an information pack was developed and distributed to all health workers. In addition, a number of meetings was organised for health workers.

The findings from the qualitative study show that generally, staff that joined the MoHCW prior to the inception of the HHWRS in February 2009 were able to recall when the scheme started. Many respondents recalled that they had participated in the scheme from its inception. Although a few could not correctly remember the

actual starting date, most were able to recall the year and more especially that it was the period '*after the cholera outbreaks'.* Although health workers who joined the ministry later were able to recall the period in which they started receiving the allowance, there was less awareness of the actual start date. In response to questions concerning communication about the scheme, it was evident that Government circulars were mostly used as the channel for information sharing. According to HSB, circulars are usually sent to the provinces and CEOs with the expectation that the information would be cascaded to districts and then to lower level staff. However, evidence from this study suggested that while administrative staff and executive committee members such as PHE may have had easy access to information through notices or circulars, this information was less accessible to staff in remote rural areas. Additionally it was recognised that administrative staff and senior staff were more likely to obtain information when they attended national meetings or workshops where the objectives or any changes pertaining to the scheme were explained. Availability and transmission of information about the scheme's objectives was therefore site and situation dependent. Interestingly, staff at mission facilities and in rural areas, were more likely to report that they became aware of the scheme through the "grapevine" or through peers and as one nurse explained:

"Just heard about it, no circular came, got the information from peers" (Nurse)

It was also common for staff to report that they received the allowance prior to formally receiving information via the channel of a circular. This was echoed by some nurses in a remote clinic:

"No, circulars weren't given. Actually it [the circular] came later after we received the money" (DEHO).

Despite the lack of in-depth explanations of the HHRWS objectives, staff generally understood that the scheme was put in place to retain staff and to stop the "brain drain" that had been experienced before its existence.

HHWRS has been implemented from January 2009 to date (August 2011), with amendments during its implementation in terms of changes in beneficiaries and the enhancements paid. The amendments were made because of contextual changes (such as dollarization, the improved economic situation and the increase in health sector funds), changes in participation of development partners, and the availability of resources and conditions for payment. Payment is handled by CA, independently from MoHCW and HSB, to allow quick disbursement and payment to health workers.

Implementation of the scheme has been in three phases (see Annex 5 for details).

3.1 January - March 2009: Emergency plan

In the first phase, the scheme was clearly an emergency plan. At the end of 2008, the Zimbabwean health system was collapsing, and various development partners, the Health Services Board and the Ministry of Health and Child Welfare discussed in the HRH Task Force ways to revitalize the system. Development partners pooled funds to pay every health worker and tutor an allowance in foreign currency, ranging from 30 USD for the lowest grades to 850 USD for District Medical Officers, conditional upon attendance at work. The rationale was that only an estimated 20% (out of a total of 65% in post) of health workers could afford to come to work (oral communication) and that others were leaving the health sector and emigrating.

The results of this first phase have been well documented and is likely that it has contributed to health workers returning to work (for data see chapter 3). Funding in 2009 remained difficult with different donors contributing financial resources; the scheme was acknowledged as a high risk venture by the HRH Task Force (Minutes HRH Task Force, August, 2009).

3.2 April 2009 - December 2010: Adaptations

In February 2009 the Zimbabwean economy dollarized and the economic situation stabilized. The government was able to pay each worker 100 USD per month from March 2009 onwards. Projections of the cost implications showed that financing the scheme would exceed the resource envelope available. In addition, the government introduced new USD salary scales, further alleviating the financial problems of the health workers. Because of these reasons, the emergency scheme was reviewed and excluded those health workers working in city council health facilities as their earnings were higher than health workers employed by HSB, mission facilities and rural councils. Health workers from Grade C4 and below- were also excluded, on the ground that these workers were less likely to leave and that the government's US dollar salary was more than the $30 allowance paid through the retention scheme.

During this phase there were some changes in the sources of payment for health workers:

- The Vital Health Services Support Program included 184 District Health Team members in the HHWRS from June 2009 onwards.

- From September 2009 onwards, the Global Fund (GF) funded the scheme, as part of Round 5 (period September 2009-July 2010) and Round 8 (August 2010- to date). Round 8 included a 2 year-financing of the retention scheme, although there was a financing gap.

- An agreement signed between HSB and GF stated that payment of top-ups was conditional and required an exit strategy, as GF has no mandate to pay for salary top-ups. The exit strategy signed by MoHCW and GF covers a period of 4 years (from 2011), with an annual 25% cut in allowances, with an expected corresponding 25% annual increase in basic salaries.

3.3 January - July 2011: Exit strategy

The first 25% reduction in payments made to health workers was implemented in January 2011. At the same time the government increased the salary and allowances of the health workers by the same percentage. Health workers were informed about the reductions through circulars and meetings (oral communication). Perceptions on these changes collected in the qualitative study are presented on p.34-35 of this report.

Since January 2011 the Health Services Board has been responsible for making workplace spot checks and the HRH department of the MOHCW carries out mini-audits, checking the number of personnel in place in health facilities in the country.

4 Impact of the scheme

4.1 Relevance and effectiveness

Relevance: Does the scheme address the principal HRH problems?
Effectiveness: Has the scheme achieved its objectives?
(See Annex 1 for questions on relevance and effectiveness and Annex 6 for more details presented in tables and figures)

4.1.1 Establishment

The total authorized institutional establishment for the MOHCW is 43,254 including all health sector personnel in public, mission and Rural District Council (RDC) institutions in the 10 provinces. Of this total, 82% (35,525) are in the public sector (refer to table 3). The total establishment for health workers in Grade C5 and above for the public sector, mission and RDC institutions is 23,208 representing 53% of the overall establishment.

Table 3: Establishment by sector, overall and of Grade C5 and above

Sector	Authorized Establishment	Percent of Overall Establishment (%)	Establishment: Grade C5 and above	Percent of Grade C5+ to Sector Est. (%)
Public Sector	35,525	82.1	19,608	55.2
Mission	4,517	10.4	2,181	48.3
RDC	3,212	7.4	1,419	44.2
Total	43,254	100.0	23,208	53.7

Mission facilities and RDC have 18% of the overall workforce and 16% of the workforce in grade 5 and above. The relatively low proportion of established Grade C5+ posts for the Mission and RDC institutions is partially attributed to the high proportion of the Nurse Aide establishment which represents 38% and 42% of the overall Nursing establishment for the Mission and RDC institutions respectively. In Annex 6, Table 6.1 shows the breakdown of establishments for the critical cadres as at June 2011.

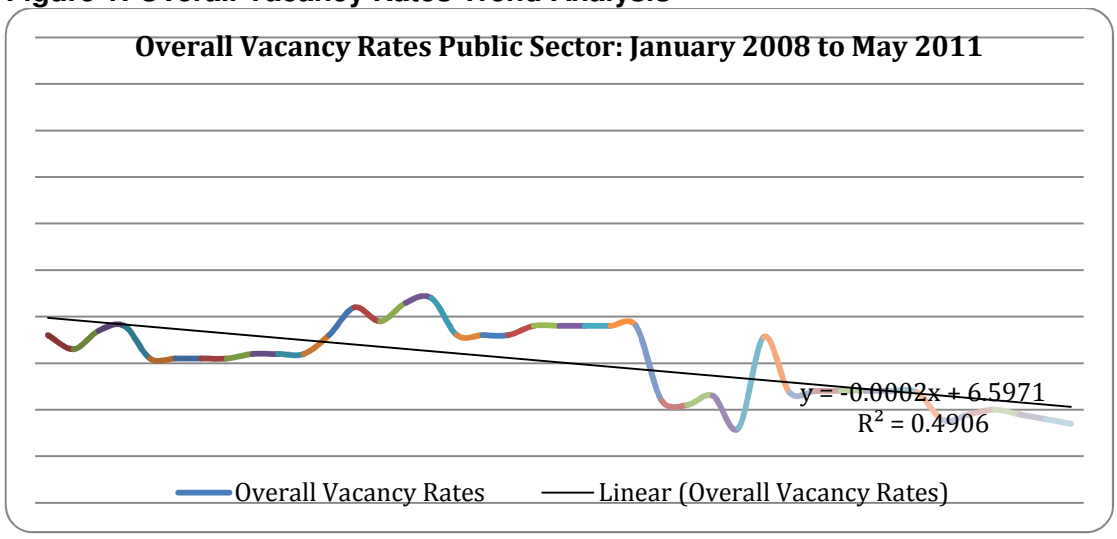
4.1.2 Vacancy rates

Vacancy rates overall, and for Grade C5 and above, are highest in the public sector (refer to table 4).

Table 4: Vacancy Rates by Sector

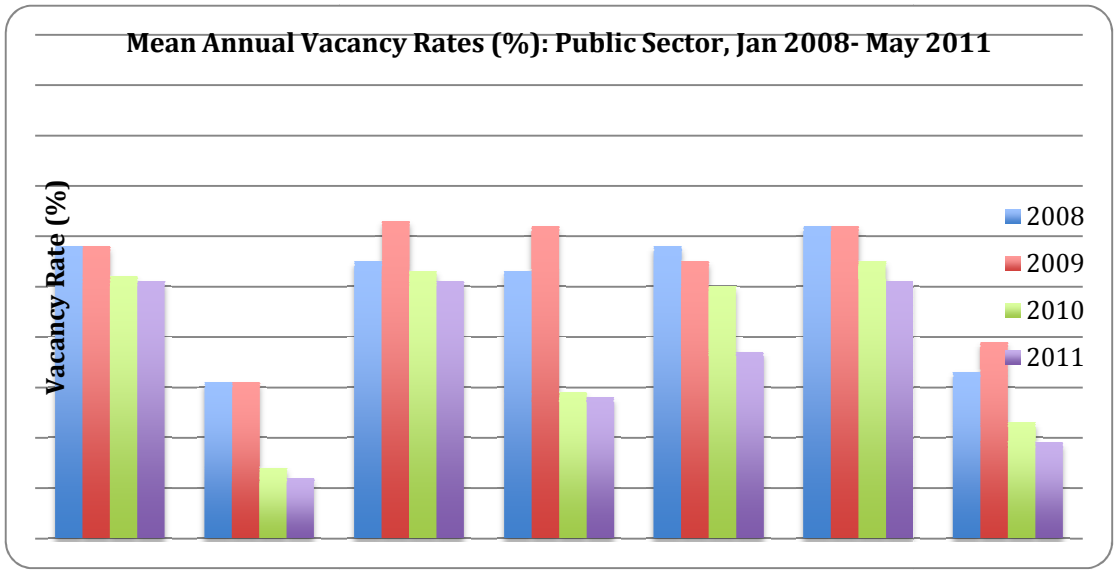
Sector	Total Establishment	In-post May/June 2011	Vacancy Rate (%)
Public Sector	35,525	29,161	17.9
Public Sector, Grade C5 and above	*19,608*	*15,114*	*23%*
Mission	4,517	4,143	8.3%
Mission, Grade C5 and above	*2,181*	*1,793*	*18%*
RDC	3,212	3,173	1.2%
RDC, Grade C5 and above	*1,419*	*1,339*	*6%*
Total	**43,254**	**36,477**	**15.7%**
Total Grade C5 and above	***23,208***	***18,246***	***21%***

Figure 1: Overall Vacancy Rates Trend Analysis



As Figure 1 shows, there has been an overall decline in vacancy rates in public sector health facilities. The downwards trend was seen for all critical cadres, although the rates of decline differed amongst the cadres. A review of the public sector monthly returns reveals that doctors, EHTs, laboratory personnel and nurse tutors have the highest vacancy rates throughout the reporting period and also exhibit the lowest reduction as shown in Fig 2 below. For instance, the vacancy rates for nurse tutors in the public sector were reported to be 47% as at the end of May 2011.

Figure 2: Public Sector Vacancy Rates by critical cadre



The biggest reduction in vacancy rates has occurred among the nurses (which include midwives); to date, the data for nurses and midwives has not been disaggregated. The high reduction in nursing vacancies has a direct positive effect on overall vacancy rates as nurses make up 59% (11,599/19,608) of the establishment of the public health workforce in grade C5 and above, and 32,5% of the total workforce, excluding Primary Care Nurses (PCN) in grade C4 and nurse aides (in total 7,757 of the total establishment).

Though the magnitude of change differs, the vacancy rates after the HHWRS were noted to be statistically significantly lower that the pre-HHWRS era for all cadres (refer to table 5).

Table 5: Comparison of Mean Vacancy Rates, 2008 & 2010, in the Public Sector

All critical cadres	Mean Vacancy Rate 2008 (%)	Mean Vacancy Rate 2010 (%)	P-value $\mu_{2008} > \mu_{2010}$
Doctors	59	52	<0.001
Nursing	31	14	<0,001
Environmental Health	55	53	0.031
Pharmacy	53	25	<0,001
Laboratory/Pathology	58	50	<0.001

It is important to note that for doctors, environmental health technicians and laboratory personnel vacancy rates still range between 50-53%. This suggests that although the retention scheme has made a significant contribution, it is not, on its own, enough. We were told by MOHCW and health workers in the field that doctors and environmental health technicians are very marketable, and therefore a retention allowance is unlikely to compete with remuneration or career opportunities outside the Zimbabwean public health sector. An additional complicating factor is the employment freeze imposed by the Ministry of Finance, which is only lifted on a

case-by-case basis.. Treasury has been approving requests for re-appointment, promotions, contract renewal and regradings.

The qualitative data also identified differences among different cadres, and, in addition, indicates differences across age ranges, levels of experience and geographical location. The older workers (with many years of experience) were less inclined to move on to greener pastures due to a fear of losing accrued benefits. And as one DEHO commented, many older workers receive support in the form of cash or goods from (families) outside the country and this together with their current salaries meant that moving on would not be of much benefit. Although there were no noted gender differences in rates of decline, the scheme has had a significant impact on staffing levels for nurses [who are mainly women]. Conversely, attrition levels for EHT's [who are mainly men] have been higher – possibly due to their marketability and because they are the breadwinners and need to move on.
Further observations showed that senior and experienced nurses and mid-wives [mainly women] are in high demand and many have left for "greener pastures" or to work for NGOs or local authorities where the pay is higher. With respect to Pharmacists and Doctors, the rate of attrition at the inception of the scheme and since, remains an area of concern and in all districts visited, interviewees articulated a shortage of doctors.

*"It [the scheme] had managed to retain other staff but not for doctors…we were 3 now I am the only one left". (*Doctor)

Allowances for doctors are not perceived to match with regional remuneration. The current "duty free" allowance (in addition to the retention allowance they receive) for the importation of vehicles for doctors is not enough to retain them. As a result, doctors (especially the young ones) continue to leave for greener pastures once their bonding period ends. Perhaps one of the most telling quotes in respect of staff retention was:

*"If you are trying to catch a cow then you put a mouse trap you will only catch mice". (*Doctor)

Vacancy rates for EHTs, laboratory personnel, pharmacists, therapists, and nurse tutors are also by the respondents in the qualitative study perceived to be high in their working areas. Currently, the lowly performing economy and limited private sector opportunities were reported as the main hindrance for a mass exodus of staff from the Ministry of Health. Conversely as mentioned above, older staff are incentivised by reasons other than the scheme to remain in post.

"I am not staying because of the scheme; I am not a risk taker."(Nurse)

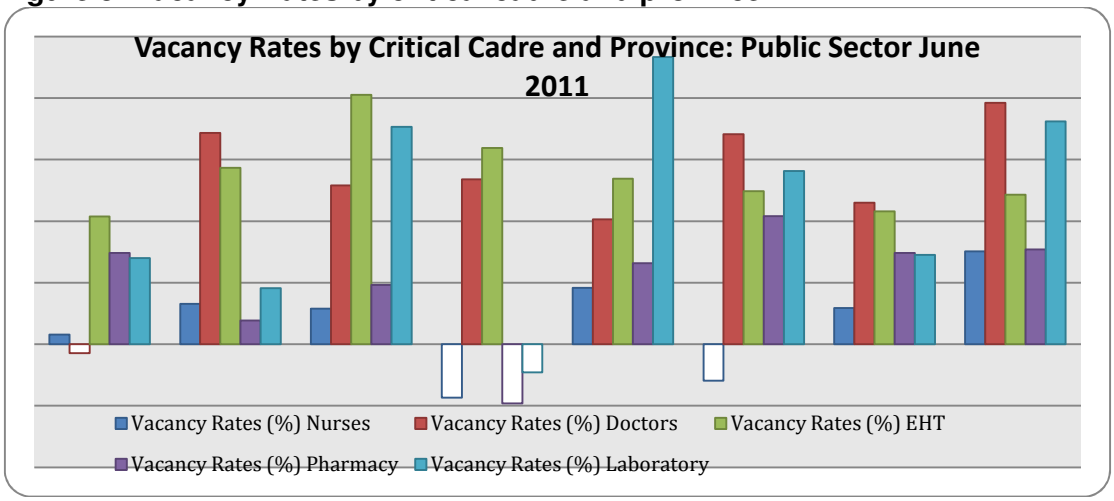
"Nursing is a calling - money or no money."(Nurse)

*"I am not planning to go anywhere my home is about 10km away."(*Nurse)

4.1.3 Provincial variations in vacancy rates

The provincial vacancy rates in the public sector as of June 2011 are shown below.

Figure 3: Vacancy Rates by critical cadre and province



Overall there is a large variation in vacancy rates for different cadres between the different provinces. The reasons are not obvious and further studies would be needed to investigate them. Of particular note are:

- High vacancy rates for laboratory personnel in Matabeleland North (93%), Mashonaland East (71%) and Masvingo (72%)
- High vacancy rates for doctors (78%) and the highest of all provinces for nurses (30%) in Masvingo
- High vacancy rates for Environmental Health Technicians in Mashonaland East (81%) and Mashonaland West (64%)
- Surplus of nurses (17%), pharmacy personnel (19%) and laboratory personnel (9%) in Mashonaland West
- Surplus of nurses in Matabeleland South (12%) and the slight surplus of doctors (3%) in Manicaland
- Another striking point is that the oversupply of nurses in Matabeleland South is in stark contrast to the high vacancy rate for doctors in the same province. This is also the case in Mashonaland West: a surplus of nurses, pharmacy personnel and lab, but a high vacancy rate for EHT.

Geographical variations might also exist within districts, but these could not be assessed as these data were not available from the dataset at MOHCW. Mission and RDC variations may also vary within provinces or districts; again, these data could not be mapped at provincial level, as workforce data is not recorded by province.

In terms of geographical location, in the qualitative study it was noted that staff in the Matabeleland region perceived that they benefit less from the retention allowance when compared with their counterparts in Northern provinces of Zimbabwe. This may be explained by the wide use of the Rand in Matabeleland and volatility of the Rand – Dollar exchange rates which in turn affects their purchasing power and value of the allowance.

Between December 2010 and 2011 there seems to have been a slight reduction in vacancy rates for nurses, while changes in payment took place (refer to Annex 6, Figures 6.17, 6.2, and 6.4 - 6.6 and Table 6.3 for details). Possible reasons are that either the changes in payment did not result in net reductions in income and

therefore had no negative impact on vacancy rates, or the time span was too short to demonstrate any negative changes. For doctors the vacancy rates increased a little during this period in four provinces and decreased to a large extent (leading to a surplus) in Manicaland. We were not able within the time available to identify the reasons for these changes, but it is important to discuss these within MOHCW and HSB and with representatives of the nursing workforce and of the doctors.

4.1.4 Actual health worker density

WHO recommends 2.3 health workers per thousand population (nurse, midwives and doctors) to allow 80% of women being able to be attended by a skilled person during deliveries and to reach 80% measles immunization coverage (WHO, 2006) The actual density in Zimbabwe is much lower than this: doctor density was between 0.01-0.02 per 1,000 population per province (in Zambia in 2006 it was 0.12/000; in Mozambique it was 0.03/000); nurse density varied between 0.5 in Masvingo and 1.4 in Matabeleland South (in Zambia in 2006 it was 1.7/000, and in Mozambique it was 0.21/000). See Annex 6, Table 6.2 for details. Although these WHO-norms do not take into account the use of lower/other cadres for different types of tasks within maternal care and measles immunization and they do not provide norms for other types of health workers, it is an indication of just how low the numbers of nurses and doctors have fallen are below international standards.

4.1.5 Personnel on the Harmonized Health Worker Retention Scheme

A total of 18,726 professionals were included in the HHWRS in July 2011. At least 18% and 70% of these professionals were in Grade C and D as shown in Table 6 below.

Table 6: Distribution of Personnel on HHWRS by Grade

Grade	No. on HHWRS	Percent (%)
Grade C5	3,484	18.6
Grade D	13,093	69.9
Grade E	2,008	10.7
Grade F	141	0.8
Total	18,726	100.0

Source: Crown Agents HHWRS Staff July 2011 Return

Grade C is mainly comprised of Primary Care Nurses and administrative staff whilst Grade D is made up of the Registered General Nurses (RGNs), Senior Nurses and other health professionals at the primary and secondary level of care- these form the largest group of health professionals.

There is a positive variance of 3% when comparing the May/June in-posts to July HHWRS beneficiaries (18726/18246 *100 = 103%). Comparison of the in-post data with an average monthly number of HHWRS beneficiaries of 18,637 obtained from six months selected between March 2010-July 2011 also shows a positive variance of 2%. Differences could be due to the likely delays in updating changes such as dismissals in the HHWRS database. The proportions of personnel on the HHWRS relative to the In-posts is greater than 100% for main critical cadres, with the exception of EHTs and laboratory personnel (refer to table 7) .

Table 7: Proportion of Employed Critical Cadres on HHWRS

Cadre	In-post	On HHWRS	Percent (%)
Doctors	884	1063	120
Nurses	13027	13574	104
EHT	850	824	97
Pharmacy	241	284	118
Laboratory	309	311	100

Source: HSB Quarter 6 Report

The relatively higher positive variances could be due to:

- Slight differences in the reporting data from which comparison is being made.
- Lack of consistency in data quality across the data management and reporting entities.
- Cadres such as doctors and nurses who also have directorate positions could possibly have been included in the HHWRS under their professional category of doctor and nurse hence the possibility of inflated figures for the HHWRS.

4.2 Appropriateness of the scheme

Stakeholders interviewed at national level in the ministry and among development partners agreed that the HHWRS was an appropriate and relevant initiative when initiated in December 2008. At that time many facilities were closed as health workers could not pay the transport costs to come to work. In addition, the cholera epidemic caused a catastrophic 98,592 cases and 4,288 deaths and required urgent action from the health system (UNICEF, 2010). It is likely that without the scheme many more lives would have been lost as health workers could simply not afford to go to work and during the cholera epidemic the emergency payment scheme was extremely valuable (oral communication). It was also appropriate as it harmonised all other staff retention efforts (including GF scheme and VHSSP scheme) into one scheme, thereby reducing inequities and perverse effects.

Appropriateness of the scheme in its early phases was strongly felt among health workers in the provinces. Respondents in the qualitative study reiterated that non-availability of vital medicines, poor infrastructure and working conditions, a lack of income played a major role in decisions to migrate externally or leave the service. They reported that staff were de-motivated to go to work prior to the scheme. Some staff engaged in moonlighting or cross border trade to survive and this led to absenteeism. Overall, the initiative was perceived to result in stabilising the staff situation in the public health sector, thus reversing the trend of attrition that was apparent among professionals at that time. The following excerpts illustrate this perception:

"We are no longer having an exodus of staff to South Africa and Botswana". (Technicians)

"I can now buy a shirt in one or two months but for the last ten years I could not manage to do that". (Administrator)

The scheme remained relevant over the period of its implementation, as government salaries, though increasing, remained low. The data showed that the overall vacancy

rate has fallen as well as the vacancy rates for some critical cadres in the period the HHWRS is implemented. The workforce situation is, however, still problematic: vacancy rates for doctors, EHT and laboratory personnel working in the public sector still remain at 50-53% and the health workforce density is still very low compared to WHO norm of 2.3 doctors, nurses and midwives per 1,000 population. This was confirmed by the responses in the qualitative study, where it was generally perceived that few nurses have re-joined (or made attempts to re-join) the service, and there was not much evidence from the respondents to suggest that the scheme helped in bringing back health cadres who had left for greener pastures

In addition, respondents were quick to point out that other factors are also perceived to be having a counter-effect on the gains of the scheme and these include the unavailability of functional equipment, a staff establishment freeze and increased workload.

*"There is a positive change because of the retained staff but there is still staff shortage…" (*Technician)

"We have challenges for specialists cadres largely due to government work conditions….Currently workers are not paid what they are worth" (HR).

*"The retention allowance boosted morale to stay on the job, however, the challenge is on the resources to use. Though we got the money, we need the tools to do our job." (*Nurse)

Although staff morale was high during the early months of the scheme's introduction, it has continued to decrease over time. The inconsistencies in disbursements of funds, the reductions of the allowances early 2011 coupled with the declining economy have led some staff to start looking for other sources of income to sustain them or better their salaries.

*"People are starting to look at other sources of income; it's because of uncertainty in disbursement and reductions." (*Nurse)

Our findings also suggested that there is a growing discourse about the differences in allowances and the exclusion of lower grades from the incentive scheme. This has created tensions between scheme beneficiaries and non-beneficiaries as shown in quotes below:

*"It was very noble though now it divided the staff - as cadres like general hands are in need."(*Administrator)

"Truth is if you hear that the money is here you keep it as a secret" You can't enjoy in the open because some of the staff are not getting the money." (District Health Information Officer)

Overall, this assessment showed important geographical variations for all critical cadres and between cadres, gender and age in the public sector. This demonstrates the need for a more comprehensive retention package and for tailor-made interventions and that, in addition to financial incentives, other factors contribute to retention. It also shows that changes in the scheme need to be communicated and implications need to be managed carefully by management at facility, district, provincial and national level.

4.3 Effectiveness and cost-effectiveness

Defined as: Was the scheme implemented with the least costs and did it provide value for money?

The use of parallel systems, whilst necessary in the Zimbabwe context, will tend to increase costs although there may be gains in fiduciary risk management and oversight.

To assess value for money (VfM) it is necessary to identify three management/administrative cost areas:

- Crown Agents as paying agent;
- UNDP providing programme management services to the Global Fund;
- Global Fund (central costs) and its Local Fund Agent, PwC.

4.3.1 Crown Agents

CA costs comprise two elements: management charges and banking charges. Total charges have been reduced during the contract period following negotiation. DFID has advised that in relation to its funding of HHWRS Crown Agents incurred costs (including bank charges and spot checks) have averaged less than 5%.

The HHWRS was set up in very difficult circumstances, in particular: i) US$ accounts were not initially permitted by regulations of the Government of Zimbabwe (GoZ); ii) records were in a poor state; iii) ongoing cash management has been required due to erratic receipt of funds from contributors; and iv) during much of the execution of the HHWRS there has been uncertainty about whether and when the paying agent contract would be tendered, and Crown Agents have been operating under three monthly contracts.

Given these challenging circumstances, on balance these costs represent very good VfM, especially considering that a system of spot-checks was designed and administered by Crown Agents.

4.3.2 UNDP

UNDP told us that it is making a 7% management charge on the GF HHWRS contributions (we understand that this is UNDP's standard charge in such circumstances), and in addition recovers approximately another 3% in relation to funded posts in its Programme Management Unit (PMU), making 10% in total. UNDP has indicated that it is seeking an increase in its PMU cost recovery to 4% and if this was approved this would make 11% overall.

A local management charge of 10% seems high. It is additional to the Crown Agents charges for managing the database and making the bank payments, so the two combined will be in the order of 14%.

4.3.3 Global Fund

Global Fund central management costs are not evident from their website. It may be assumed that central overheads by the Global Fund of its HHRWS are in the range of 1% to 2%.

In Zimbabwe (as in every country in which it operates) the Global Fund has contracted a Local Fund Agent (LFA) 'to oversee, verify and report on grant

performance'. The costs of providing this service (which are contracted to PricewaterhouseCoopers, PwC) have not been established and there may be difficulties attributing LFA costs between different GF activities in Zimbabwe. However it is assumed to be similar to Global Fund HQ expenses, e.g. 1% to 2%.

If these assumptions are correct, we estimate that funding flowing through the Global Fund to the HHWRS incur the following overheads:

Global Fund central costs:	1% to 2%
PwC costs:	1% to 2%
UNDP	10%
Crown Agents excluding verification	3% to 4%
Total:	**15% to 18%**

This seems very high compared to the charges of Trust Funds covering fragile states (such as the Fragile States Facility run by the AfDB, which charges 4.5% for the complete management service).

Funding between different partners is in essence pooled and fungible. DFID, as the third biggest contributor to the GF (US$1,481m or 8% of the total) should have significant leverage in monitoring GF costs, and it is recommended that this issue is raised with Global Fund senior management[6].

DFID gave the Global Fund high scores for Value for Money in its 2010 Multilateral Aid Review. It is appropriate for DFID to consider whether this Zimbabwe experience is consistent with this finding. It appears that it increased management costs by between 10% and 13% compared to funding the scheme directly.

4.3.4 Verification and spot-checks

At the start of the scheme up to January 2011, CA was responsible for spot-checks at facility level as a monitoring instrument to verify presence of staff. According to the respondents, the scheme and the way it was monitored had a positive effect on presence of workers as cases of absenteeism from work are reported to have reduced as a result of the retention allowances. Health workers are now required to record their attendance at work through the introduction of a tracking system (logging in and out). This system is also used for purposes of calculating retention scheme allowances every month.

*"Things have changed, logging systems tracks working hours, absenteeism are now rare, sick leave need to be approved by doctor." (*Technician)

Senior management mentioned that the scheme has brought back 'good work ethics' (because of the need to clock in and sign for presence) which no longer prevailed in the collapsed health system; and one senior provincial staff member said:

"There is a reduction in the mini-markets [conducting private business in office during office hours]. They were so many off-sick, death messages. As the allowances were coming monthly there has been a gradual behavioural change. Others were stealing and people were not 100% at work, they were doing other things to survive. Hardships were causing that kind of behaviour. Now people are genuinely sick but

[6] The UK House of Commons Select Committee on Development is concerned about the lack of traceability of DFID funds going to the IFIs and international purpose specific funds. "Tagging" of funds, to address this issue, should be possible but is not in place yet for the Global Fund.

*previously people were paying doctors to write them sick letters this has since stopped".(*EPI Coordinator)

Routine verification process, through spot-checks, is now being undertaken by the HSB, which has recruited five auditors with the support of the GF. Crown Agents is no longer undertaking spot checks. Crown Agents wrote to UNDP in 2011 recommending that a full verification exercise should be undertaken, in order to minimise fiduciary risks. UNDP did not formally reply but advised us that it was unable to fund further spot-checks or verification by Crown Agents because:

- The Global Fund, through UNDP, is supporting the recruitment and training of verification officers by the HSB;
- The Global Fund is paying PwC for an annual verification process.

The team received contradictory information regarding the extent to which PwC reports were circulated to stakeholders at country level. The team were advised that PwC is not allowed by its LFA contract with GF to share its reports on HHWRS with partners contributing to the scheme, such as the Principal Recipient, UNDP, although the team was provided with that documentation which was available[7].

It may be that the availability of this information is improving. It is important that stakeholders are confident that the migration to the new monitoring systems is undertaken in a way that minimises fiduciary risks. Scheme management costs went up when funding was taken over by the Global Fund. However we are concerned that the lack of a comprehensive verification process during 2011 may have resulted in an increase in, fiduciary risks.

Overall VfM findings are as follows:

- In the initial stages of the crisis VfM was very good relative to the high impact of reopening facilities;

- The verification processes, when it was taking place in 2009 and 2010, did not identify ghost workers, but it did encourage health workers to turn up for work, and this very probably increased attendance at health facilities. The approach to verification used by Crown Agents was both rational and cost effective, and included positive lesson learning from early spot-checks. It has worked well in terms of information sharing with the HSB and MoHCW.

- The HHWRS scheme architecture and reporting lines are not consistent with optimizing VfM. In particular the relative roles of Crown Agents, UNDP, the HSB and PwC with respect to verification have not been fully clarified to stakeholders. They entailed some duplication and the migration of verification responsibilities to HSB may have contributed to fiduciary risks.

- Subsequently, since the Global Fund has been the main conduit of funding, VfM has been less good with high total management charges. The overall structure of accountability is complex, and this tends to undermine both effectiveness and VfM.

[7] "Retention Scheme for Health Workers in Zimbabwe, Verification Report", PWC March/April 2010; and Action Plan for Implementation of Recommendations of the Local Fund Agent On-Site Data Verification (OSDV) matrix, PWC, 31st March 2011.

- Disruptions in HHWRS funding have led to unpredictable funding for health workers. Anecdotally, health workers struggle to access their accounts, especially in rural areas, and face significant travel costs as well as, in some cases, bank charges for withdrawing funds[8]. It seems unnecessary that they should have faced delays in receiving funds, and this may have impacted negatively on the effectiveness of the scheme in terms of staff retention.

- Future improvements to VfM will depend on: i) Substantive improvements in policy dialogue with sector stakeholders to optimise use of resources for service delivery; ii) Enhanced clarity regarding sequencing of reform steps (e.g. starting with a review of establishment numbers and locations); and iii) Improved lines of reporting and accountability to minimise duplication (e.g. of verification) and enhance monitoring of the scheme.

4.4 Impact

Defined as: Has the scheme improved service delivery?

Assumption underlying the scheme: Availability of critical cadres increases the number of people using services that are provided by these cadres.

Impact in this assessment will be measured in terms of utilisation over time of three types of services that are provided by critical cadres[9]:

- Outpatient attendance- mainly in rural clinics and hospitals provided by nurses or medical doctors;
- Deliveries assisted by skilled attendants, provided by nurses or nurse-midwives;
- People initiated on ART, provided by doctors and with inputs from lab technicians.

The team recognises that service delivery is a team effort and that most services cannot be attributed to a single cadre alone. However, in order to provide a rough estimate of the contribution of retained cadres to improving health service performance, we have selected these indicators as proxies (and they are recorded and reported at provincial level in the HMIS system of MOHCW and of the National Aids Council).

The team is not able to determine attribution of the HHWRS to changes in utilisation of services, and can only conclude that the scheme may have contributed to such changes. Other factors are likely to have had a strong influence on utilisation of services as well, including socio-political and economic changes, drug availability, functionality of health units, user fees, transport costs and other social factors influencing health seeking behavior (refer to Table 6.4 in Annex 6 for key indicators of other factors influencing utilisation).

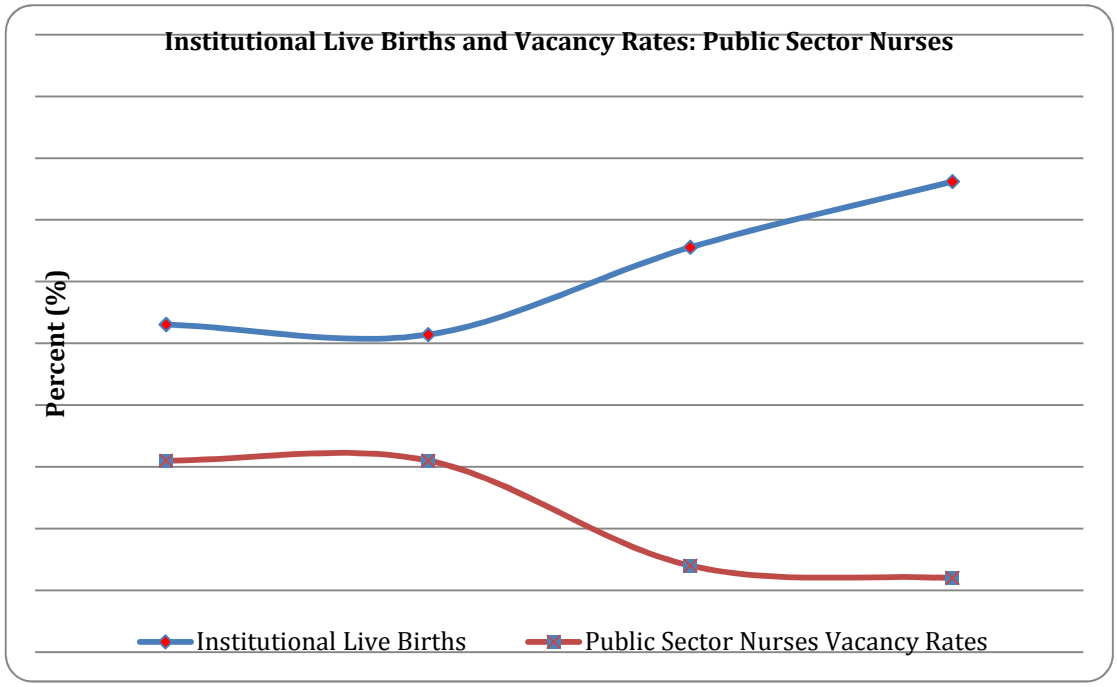
4.4.1 Institutional Live Births

The average percentage of institutional live births (ILB) per expected births increased from 53% to 76% (refer to Figure 6.7 and Table 6.5 in Annex 6), across all provinces. Important to note is that ILB does not necessarily equate to having a skilled attendant present during the delivery**;** attendance by a skilled professional is not recorded in the HMIS system. There is a strong negative correlation ($\rho = -0.9593$) between the vacancy rates of the nurses (public sector) and rate of institutional live births during

[8] The evidence base for this will be improved through the Qualitative Assessment.
[9] Care might also be provided by trainees- this could not be derived from the data

the period i.e. as the vacancy rate decreases, the institutional live births increase (refer to figure 4). The association is also augmented by regression analysis, which shows a significant negative coefficient (-1.07; p=0.041). However, this model explains only 88% of the variations and no other potential factors were included in the model.

Figure 4: Institutional Live Births and Vacancy rates

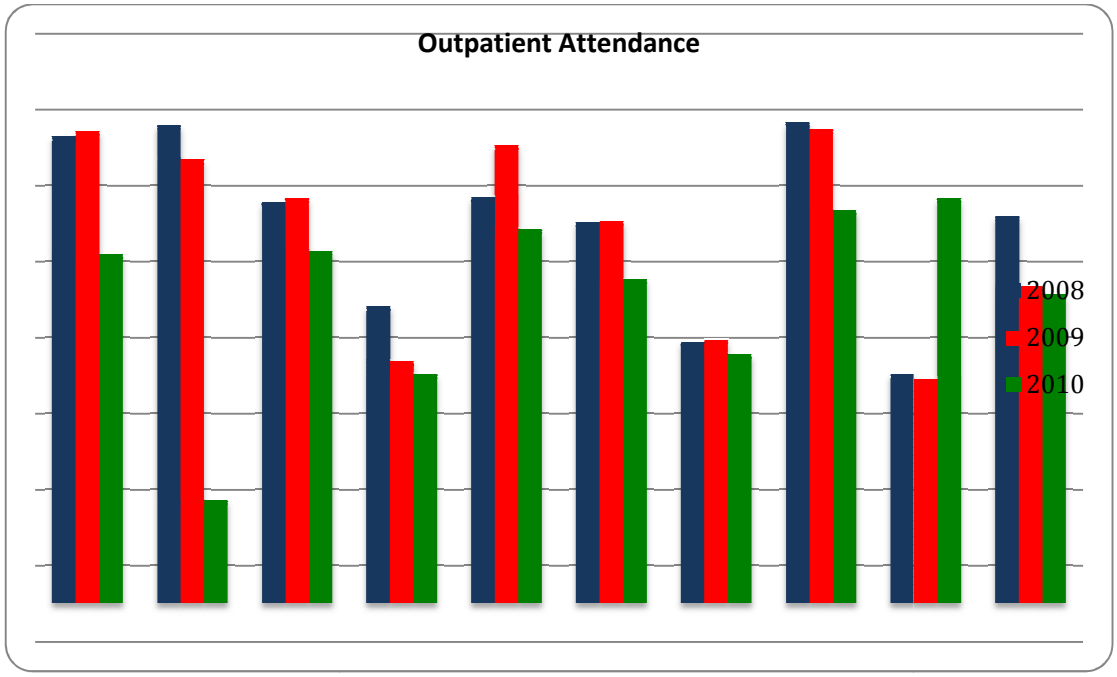


Although the figures seem to show that the nursing vacancy rates has a positive influence on ILB, care should be taken to interpret these data as attributing high levels of ILB to the retention scheme. For instance, it is surprising that Masvingo province has high ILB rates throughout the reference period whilst at the same time exhibiting significantly high vacancy rates for doctors and nurses in the public sector. As Masvingo has a high number of mission facilities (refer to Figure 6.8, Annex 6), this could contribute to the explanation of its high ILB rates. The contradiction in the province of Masvingo is a clear indication of other contributing factors. An important point is that MMR is very high in Zimbabwe and stands at 725 women per 100,000 live births (ZMPMS, 2007), despite the high number of ILB. This raises the question about factors of influence, such as whether women with complications arrive late and about what takes place at facility level: are women attended by untrained cadres? Is equipment not in place? Is referral too late, too far or too expensive?

4.4.2 Outpatient Attendance

The average annual outpatient attendance rates per province were 1.0, 1.0 and 0.8 per capita for the period 2008, 2009 and 2010 and showed a decrease, except for Harare (refer to figure 5). This clearly shows that although health workers were coming to work, this does not automatically lead to positive changes in utilisation, as other factors could have been of influence. The decline in attendance could be due to the fact that public health system was dealing with an emergency health response to a cholera epidemic in 2008 and 2009. Other influencing factors could be transportation costs, user fees, preference for traditional healers etc. A study on access to care will be implemented over the coming months and should contribute to a better understanding of the factors influencing health seeking behaviour of the Zimbabwean community.

Figure 5: Outpatient Attendance: trend analysis



4.4.3 ART Initiation

The rate of ART initiation in the health sector has steadily increased over the past years. The proportion of patients initiated on ART on a quarterly basis relative to the number of patients newly eligible for ART to date has increased from 15.8% in the Jan-Mar 2010 to 22% in the April-June 2011 (refer to Table 6.8, Annex 6). ART initiation requires team work and involves contributions of various critical cadres: The nurse is responsible for patient medical history taking, testing and counseling; lab personnel undertake clinical tests -if equipment is functional-such as regimen based tests and CD4 counts. The doctor is primarily responsible for diagnoses.

Possible associations between ART Initiation and vacancy rates for doctors, nurses, and laboratory revealed that there were little or no correlations or associations between vacancy rates and ART initiation. The correlation coefficients were very close to zero ($p>0.05$). It is also important to note that this analysis does not fully take into account all possible confounding factors such as functioning lab equipment, drug availability, stigma among health workers or patients, user fees etc. The trend in ART

initiation therefore is not necessarily a result of the changes in the vacancy rates. However, it is important to acknowledge that the amount of data used in this type of analysis may not have been adequate to sufficiently capture small effects or changes in the trend. In addition, possible distortions could have arisen in this analysis, as vacancy rates for the cadres are specific to the public sector institutions whilst ART Initiation data is incorporating data from all institutions, including the mission and council facilities. In addition, as there is a chain of critical cadres involved, it is difficult to link the trends in ART initiation to one particular cadre, e.g. if the number of doctors has increased, but the lab personnel is still not available, patients would have no access to ART initiation when guidelines require CD4 count.

4.5 4.5 Perceived changes in utilization of services

Respondents in the qualitative study perceived a change in use of health care services; the availability of vital medicines and the presence of staff at work due to the retention scheme are perceived to have largely contributed to an increase in the utilisation of health services. As a result most respondents perceived increasing workloads, particularly for those cadres that attend directly to patients such as RGNs, PCNs, midwives and doctors. The study also revealed that workload increase cannot be attributed to these factors alone. The situation has been exacerbated by the fact that staff establishment has not changed meaningfully for over 30 years in spite of changes in disease burden and population increase in many catchment areas. In addition, the freezing of posts makes it impossible to recruit staff even though they are urgently needed. Furthermore, a continued increase in introduction of new programmes such as PMTCT, OIC as well as improved availability of medicine and improved service quality that attracts more patients to health facilities is perceived to have contributed to an increase in workload. Additionally, respondents in some facilities indicated that variation in user fee charging practises may also explain why workload is higher in some facilities than in others, as patients were reported to shun facilities that charge for services in preference to those that freely offer services.

"Workload is high especially for maternity". [Due to shortages of mid wives] (Technician*)*

"Workload increased since the scheme started. Since the time retention allowances were introduced, some NGOs have made initiatives to get people to get medical attention from health facilities…" (Nurse)

Further, some staff reported that the increase in workload has been impacted by the recruitment of less experienced staff to fill vacant posts.

"Gaps have been felt for posts that cadres who are experienced are leaving and been replaced by less experienced staff hence increasing workload…" (Technician)

Clients, on the other hand, attribute the increased workload to tardiness by health staff. While clients acknowledged that staff including student nurses are now available in facilities and that they are getting a 'better' service, they fail to understand why they need to spend the whole morning at a facility when seeking treatment. Most of the clients complain of long waiting hours.

"It makes no difference if you are punctual. If you come in the morning you still leave in the afternoon. At times it's like there are on go slow not knowing whether they are relaxed or they are used to bhodabhoda (loitering) (male respondent, FGD)

"The waiting times are long….They (staff) are on a go slow…They (staff) go for tea break at 10 and come back at 11…after lunch its worse…….There would be three of them in one room and they take their time….Student nurses are delivering better services than them (qualified nurses)". (Female respondents, FGD)

Both the clients and health workers noted that apart from the retention scheme allowance the availability of other resources such as transport and medical sundries is also important.

"Like the day before yesterday the doctor was supposed to come but failed because of transport problem but this also affects the patients as they would have travelled long distances (e.g. Sawmills is 39km away meaning she would have walked for nothing. " (Women, FGD)

"Client' satisfaction cannot be achieved on human resources only. Other resources such as financial resources to procure some items are needed…….Government is still not able to provide sundries, medicine, and food in wards…." (Administrator)

*"If we are given enough resources to use if guys in the pharmacy are given enough drugs to dispense, the catering department have enough equipment and food so that we improve on the quality of food we give to the patients". (*Hospital Food Services Supervisor)

4.6 Conclusion: changes in utilization

The data clearly demonstrate the difficulties in relating the HHWRS to utilization of services. The presence of critical cadres is essential, but not sufficient to assure that patients are utilizing services as confirmed by respondents in the qualitative study. In addition, the data on utilisation of services from the HMIS do not necessarily correspond with perceived increase in use of services and in workload among the respondents in the qualitative study. This might be explained among others by the increase in number of activities, the outdated establishment and the employment freeze. It means that there is no direct attribution to the retention scheme. This does, however, not imply that the scheme was not appropriate, it is an important contributing factor to reduction in vacancy rate and without the scheme, it is likely that there would have been a stronger migration pattern, in particular for nurses. But it is also clear that utilisation of service requires strengthening of the system.

5 Sustainability of the scheme

This section address sustainability of funding, implementation and results

5.1 Funding

Data on the total funding received under the HHWRS is included in the Table 8 below. Whilst the 2011 data reflects revenue to date, it may be seen that total funding in 2009 considerably exceeded that received in 2010.

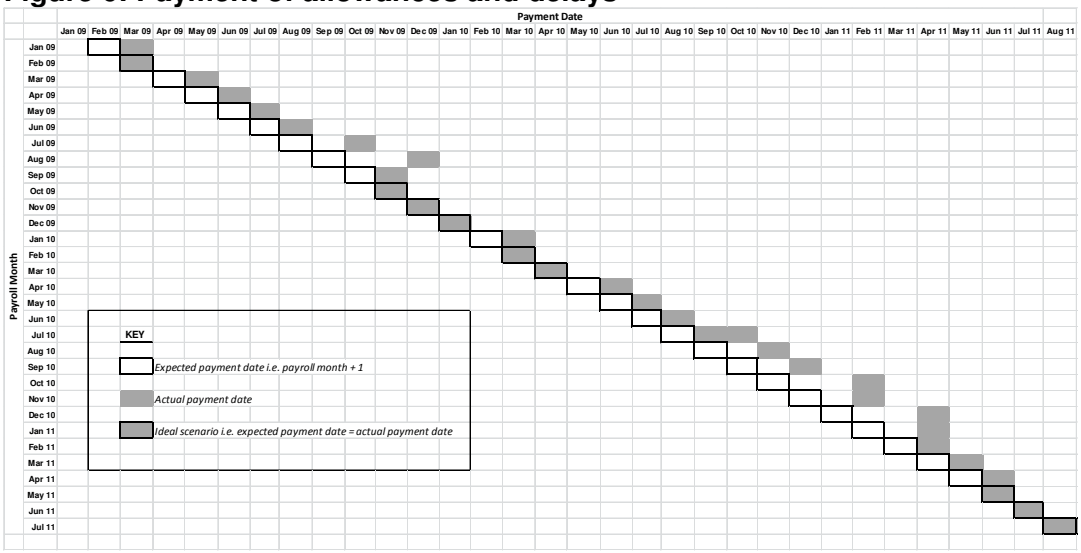
Table 8: HHWRS Financial Contributions (Source: Crown Agents)

	2009	2010	2011	Total
DFID	7,882,192		4,656,300	12,538,492
UNICEF	5,218,0568			5,218,658
ESP	4,350,000	350,560		4,700,560
VNSSP		490,585		490,585
UNFPA	870,500			870,500
Global Fund[10]	8,637,992	22,402,249	14,114,562	45,154,803
DFID Cholera	807,609			807,609
Total	27,766,951	22,243,394	18,770,862	69,781,208

5.2 Release

Delays in receipt of funding disrupted the timely release of retention scheme payments, creating a significant problem for Crown Agents as paying agent. Figure 6 below captures the consequences of this. It may be seen that in only 9 months has it been possible to pay health workers in the expected month (i.e. the month following the provision of the service), whilst payment was delayed by 1 month on 15 occasions and by two or more months on a further 7 occasions. The main reason for delays was the late release of funds by the Global Fund.

Figure 6: Payment of allowances and delays



Delays in payment to health workers were an important issue in the qualitative study. When the scheme started, workers received their allowance in the form of cash. From April 2009 Crown Agents (CA) was tasked to disburse the allowance to health workers on behalf of the donors and the MOHCW. To facilitate the disbursement

[10] It is understood that Global Fund management charges are excluded.

process, workers reported that they were asked to open a foreign cash account (FCA). The overall disbursement of funds was perceived to be erratic and haphazard and to have worsened since the scheme started, the respondents also reported a lack of information regarding disbursement dates and many articulated that they have lost track of which month the allowance is for.

*"Sometimes you lose track of which month you haven't been paid and there isn't communication on when it is coming." (*Doctor)
*"We are always in the dark. You just find money in the bank." (*DEHO)

Beneficiaries also reported backlogs in payments, and allowances being paid at a different time to salaries. This means they often have to go the bank a couple of times to withdraw funds thus necessitating unnecessary time off work.

*"We get it this week, then next week, and the following week. It does not come all at once."(*Nurse)

On the issue of household budgeting, it was apparent that delays and unpredictability of disbursements mean that beneficiaries are not able to budget ahead of receiving the allowance. They tend therefore to buy impulsively when they receive the allowance. They do not rely on it for budgeting purposes.
*"You cannot plan your things basing on it because you can go for two months or so without getting the money."(*Administrator)

Apart from late receipt of retention allowances, the health workers incurred costs in accessing the allowance, and bank charges and transport costs were cited as the main costs. Health workers indicated that bank charges ranged between US$3-$14 depending on the type of the bank. Health workers with two bank accounts are the most affected. Some workers had to open an account specifically for allowance deposits which is in addition to maintaining an account for deposits of their government salary. According to Crown Agents some workers had existing accounts with "sanctioned" banks and since this was unacceptable for retention allowance deposit purposes, beneficiaries were forced to open another account. Health workers also complained that monthly bank charges are levied even in the event that the allowance is late or not paid at all.

*"We have two banks, one for salary and the other for allowances so we have double bank costs". (*Nurse)

Workers in areas without access to banks are affected by the high cost of travel to nearby towns to collect their allowance. Transport costs incurred depends on the geographical location of the staff. In this study the highest fare reported was $8.00

"*We don't have any banks here so it costs me $8 to and from Bulawayo". (*Nurse)

In remote areas of Binga (in Matabeleland South-though not studied in this evaluation) one of the health workers commented that in order for these staff to retrieve their retention allowances from banks, they may incur costs of up to US$30 transport and overnight accommodation [as they are unable to return home on the same day]. This raises the need for discussion around the question of whether the allowances should be higher in geographical locations areas where access to banks is limited and communication costs are high or the need to change payment systems.

However, despite the irregular disbursement and complaints about access costs health workers reported that the allowance is *"worth it*", and that they cannot do without it. It facilitates the purchase of basic commodities and "*it is* (perceived to be)*…. better than nothing" (*Nurse). Some health workers recognised and appreciated that they are better off than civil servants in other line ministries that do not receive an allowance. They reported that they would "cry foul" if the allowance is abolished.

"It is a worthy scheme since it's not all civil servants in other ministries who are paid. It's an incentive we appreciate" (Nurse)

A condition of the Global Fund's engagement was that a phased withdrawal of the Retention Scheme would be agreed. In October 2010 the Global Fund Portfolio manager wrote to the GoZ noting that the maximum funding available under the Round 8 Award was US$26m and with the rise in the number of workers covered from the initial 17,445 to the current 18,860, no further net increase would be funded under the scheme. This cap, together with the MoF imposed recruitment freeze, achieves the exact opposite to the HHWRS: it may be leading to a situation where some newly qualified health workers are unable to find posts. This highlights the need for effective needs-based planning.

The qualitative study findings indicate that the 25% reduction of the HHWRS allowance in the last year has brought about a general sense of anxiety and uncertainty of the future among the beneficiaries. Many expressed disappointment and felt that the reduction was ill-timed, as expressed below:

"It meant zvinhu zvaoma (times are hard), increase in salary meant decrease in allowance and cost of living is now high". (Nurse)

*"It means cutting off things I used to do by 25%". (*Public Health Officer)

Added to these sentiments is fear of complete withdrawal of the scheme

*"This is the fear that 'the uncle' will say I'm tired of feeding these kids". (*Nurse)

And for others:
"*They told us that the money would be slashed by 25% and we accepted it because half a loaf is better than nothing considering where we were coming from we must be thankful that we are getting it [the allowance]". (Hospital* Food Services Supervisor)

Almost all the respondents stated that the gains made with the introduction of the scheme would be eroded if it is discontinued. Closely linked to this is the issue of working conditions and there is a fear that the situation prior to 2009 would be repeated especially among the young workers.

"It will be a problem once we remain getting our salaries only we will be in trouble because as of now we are failing to pay school fees[for our children], so scrapping it off removes the recognition that we had". (Technicians)

"To me it will be a set back because I have been getting it but I would not leave because of that." (Nurse)

"For me will say I have options because I am towards retirement, even if I decide to go, where do I go and start? My family is here and my children are grown and so forth and so on. I feel the money I am getting can push me up to my retirement. But

*then the younger ones are complaining because they still need to live a better future". (*Nurse)

The removal of the scheme is aligned to an increase in salaries over the same period of time (25% reduction in allowances at the same time as 25% increase in salaries). This increase was however, not mentioned by the respondents in the qualitative study.

5.2 Salaries

A hiatus occurred before a phase-out in the scheme was agreed, with a 25% reduction in funding in 2011, and subsequent 25% reductions being imposed in 2012 and 2013. The GoZ responded[11] highlighting increases in the wage bill for the health sector and the GoZ's provision of non-cash incentives. To date the GoZ has fulfilled its commitments, with further significant remuneration increases, averaging 35% being implemented from 1st July 2011, as shown below:

[11] Letter by Dr H Madzorela 4th January 2011

Table 9: Health Service Salaries and Allowances by Grade ($/month)

Grade	Cadre	January 2011 Total Package	Salary	Trans-port allowance	Hous-ing Allowance	Repres-entation allowance	Total Package from July 2011	Average increase
E5 (2)	District Medical Officer	459	308	66	73	156	603	31.4%
E5(1)	Senior Registrar/ Deputy Director	459	308	66	73	156	603	31.4%
E5	Senior Hedical Health Officer	328-334	300-308	66	73	0	439-447	37.5%
E4	Hospital Medical Officer	321-326	292-299	66	73	0	431-438	34.4%
E3	Matron/District Nursing Officer	315-320	284-291	66	73	0	423-430	34.8%
E2	Jr Resident MO;Matron; Principal Medical Lab Technologist	309-314	277-283	66	73	0	416-422	35.1%
E1	Leprosy Coordinator	302-308	269-275	66	73	0	408-414	34.8%
D5	Health Training Officer	291-296	261-267	66	65	0	392-398	35.1%
D4	Sister in Charge	285-289	253-258	66	65	0	384-389	34.8%
D3	Sr Medical Laboratory Scientist	279-283	246-250	66	65	0	377-381	34.8%
D2	Sr State Reg' Nurse	272-277	237-243	66	65	0	368-374	35.2%
D1	Environmental Health Officer	266-270	230-235	66	65	0	361-366	35.4%
C5	Health Information Officer Primary Care Nurse	241-246	218-223	50	57	0	325-330	34.6%
C4	Student Nurse	236-240	211-217	50	57	0	318-324	38.1%

Source: Health Services Board

5.3 Health budget

The GoZ health personal emolument (PE) bill is almost half the GoZ health budget and this PE represents 4.5% of the total GoZ budget. Increases in PE are squeezing other parts of the health budget, in particular the non-wage and capital budgets.

Table 10: 2011 Budget Summary

Total GoZ budget	$US 2,746 million
Allocation to MoHCW	$US 256.2m
Share of GoZ budget	9.3%
Per capita allocation (assuming 13m population)	US$19.70
MoHCW Sub-sectoral allocations:	
Employment	US$123.4 (48%)
Non-wage recurrent	US$ 85.7 (34%)
Capital expenditure	US$47.1 (18%)

However the overall budget is proving over-optimistic. The GoZ operates a cash budget and only releases funds that are available. The year-to-date releases to MoHCW are running well behind budget, as is shown below:

Table 11: MoHCW Revenues & Expenditures Financial Year 2011-12 (July 2011)

Annual budget	US$256.2
Disbursements to MoHCW to July:	US$110.0
Releases to end July 2011	42.9%
Target (7 months)	58.3%
Expenditure by MoHCW to July 2011	US$108.8m
Expenditure to date	42.4%

At MoHCW level PE is crowding out non-wage and capital expenditures, as can be seen below. The July 2011 remuneration increases this problem will become worse. Other things being equal, this will impact on service delivery.

Table 12: MoHCW Expenditures by Category (US$)[12]

Category	Budget	Year to date (July 2011)	Expenditure
Target (7months)			58.3%
Employment	88.3m	52.3m	59.2%
Non-salary recurrent	120.7m	48.9m	40.5%
Capital	47.1m	7.5m	16.0%

[12] NB: Some remuneration wage-related costs are hidden under non-wage recurrent expenditure.

5.4 Arrears

It is also evident that significant arrears are occurring at sector level, for example in paying utilities. One example is that Concession District Hospital has US$35,000 arrears to ZESA, and is currently paying US$500 per week (of reported US$2500 user fees per week) to clear these arrears. There reported shortages of consumables such as stationery. There is also clearly a maintenance deficit: assets are deteriorating which must have an impact on patient care, working environment for employees and potentially attitudes to work (ethos).

Funding to the sector must also take account of changes in user charges, and the ability of local management to retain user charges. Retention of user charges for use by facility/sector varies and the extent to which user charges are being utilized for patient benefit is not evident[13]. Distortions in service provision may also be occurring as donor/protected areas, e.g. neonatal & child health and HIV/AIDS are drawing resources from non-protected areas (non-communicable diseases).

5.5 Conclusion

The HHWRS must be embedded in realistic sector financing plans, encompassing employment, (PE) non-wage and capital expenditure elements. At present there is not a realistic Medium Term Expenditure Framework (MTEF) functioning at sector or national levels. Whilst a full MTEF is likely to be unrealistic in the short term, it is essential that an appropriate balance is to be found between the key elements of expenditure if service delivery is to be optimized. In addition, it is clear that user charges are being applied in an inconsistent manner at different levels of facility; these charges lie off-budget and utilization of the fees raised is also variable and not necessarily transparent.

It is therefore proposed that any future extension to the HHWRS should form part of a **compact** with Government (the MoF, HSB and MoHCW) that would encompass three core strands:

- Health worker management on a needs basis,
- Staff mobilization, motivation and retention;
- Sector financing including user charges;

6. Scenarios for Moving Forward

Scenarios have been prepared reflecting the following logic:

6.1 Stage 1: Establishment Review.

As noted the last comprehensive establishment review was completed in 1980, more than 30 years ago. As such, analysis of vacancy rates is severely handicapped by the lack of systematic information on current needs and priorities for both the public and mission facilities. This needs to be addressed as a matter of urgency so that vacancy rates can be monitored against reliable establishment requirements.

Various HRH studies recommendations have been made to rationalize planning for HRH (MOHCW, 2010a; Wheeler, 2010; van den Broek et al, 2010), for instance by conducting workload studies (WHO, 2010). These form inputs to the baseline for the

[13] Anecdotal evidence only: Tsungubvi Polyclinic in Mazowe District reported pressure to hand over 70% of user charges to Council officials rather than the current 30%.

review. The analysis itself would be undertaken on a sample basis through a workload analysis of a number of successful health facilities (e.g. district hospitals, polyclinics and rural health facilities) in different provinces covering both public sector and mission facilities. This would enable "norms" to be developed which would be used to assess the optimal level of staffing. Care would need to be taken when establishing norms to reflect catchment populations, whilst accepting that well-performing institutions naturally tend to attract more patients from a broader catchment area than poorly performing institutions.

Norms would also reflect the demands placed on health workers of the basic health care packages. They will be adjusted to reflect seasonality, given the annual upsurge in malaria and water borne infections. They would also take account of the burden placed on facilities of providing ARVs. Whilst adjustments can be made to reflect local circumstances, it will be important that the Establishment review reflects top-down financial constraints as well as bottom-up sector needs. In order to avoid establishment numbers creeping up to unaffordable numbers, it is desirable that "hard" ceilings should be agreed in advance.

The results would be used to undertake an analysis of current staffing by cadre against the optimized norms at different levels and to extrapolate the results to other facilities. It is accepted that localized factors may mean that some institutions need to depart from the norm, and a process of negotiation will be required to optimize establishment levels.

This review should be undertaken by HSB working closely with MOHCW. It should include representatives of professional associations, MoF and MoE to assure ownership of the results. This could be facilitated by external HRH expertise guided by WHO workload Indicator on Staffing Needs (WISN) The Ministry and the Board have approved the undertaking of WISN studies to inform the establishment review.

Once an updated Establishment has been agreed, it will be important to use this as the benchmark against which changes can be monitored by type and level of institution, cadre and location.

As shown in this report, there is an urgent need to improve the data base and the linkages between HMIS and staff returns, between public sector and mission/rural council data base, and between the retention data base and the staff returns.

6.2 Stage 2: Vision and Strategy for Retention

The HRH policy includes policy measures on retention that cover financial and non-financial incentives, staff motivation and improvement of working and living conditions. These form an entry point to develop a comprehensive retention plan. Although the strategic plan 2010-2014 includes a variety of incentives, it would benefit from a (written) vision on how the proposed activities would improve retention, as well as a description of the strong and weak points of the current measures in place. For instance: the public health sector uses measures such as bonding upon graduation, offering staff housing and discussions take place on task shifting to other cadres (ART initiation by nurses, surgery by clinical officers).

These experiences should be documented and evaluated jointly as the different measures in place may well strengthen each other, for instance the bonding scheme seems to have had an impact on retention as well (oral communication MoHCW).

Documentation needs to include detailed costing of different measures, identifying what financial costs are incurred and by whom. A monetary value should be attached to "in- kind" benefits such as the provision of accommodation and utilities, where these are not recharged to the employee. If the sector is to be made sustainable over the medium term, uncosted benefits should be mainstreamed onto the budget, so that the sector budget is realistic about the total cost of employing health workers. This also applies to any pensions and related benefits that represent liabilities to the employer.

It will be informed by the data analysis undertaken under this assignment, elaborated, as necessary with additional analysis of selected geographic areas and facilities. Since data sources are currently incomplete, it may require additional research, including qualitative studies. As part of the strategy it would greatly benefit HR management if routine staff "exit surveys" were instituted, initially on a pilot basis.

6.3 Stage 3: Link Staff Retention to a package of interventions

This report clearly shows how the different factors influence utilisation of services and that health worker retention strategies are only one component. This implies that direct attribution is simply not possible, but that it is important to clearly spell out the expectations of retention interventions and to monitor these over time when an HRH Information System is functional. An additional option is to include some HR retention indicators in the monitoring system currently implemented in the Vital Medicine and Health Services Survey.

To respond to sustainability issues, and assure sustained success, the current data give a good indication of what needs to be addressed. We suggest that the HRH Task Force use this report and develop such a vision and intervention logic, which will make the plan more differentiated (in cadres, and area-specific measures). This would need to include an overview of retention efforts in the mission and rural council facilities.

The scheme focused on payment of financial incentives; evidence elsewhere clearly shows that one single intervention, such as payment of financial incentives, is less successful than combined interventions (WHO, 2010). It is therefore important to include other types of interventions in the area of education, regulatory interventions, and/or personal and professional support (ibid). Examples are preferential access to training after service in rural areas, rotation in most remote areas, improved professional support- through mobile phones and supportive supervision (including for managers), maintenance of staff housing etc. In the qualitative study, respondents brought forward a variety of options to motivate them to stay on the job: The most often mentioned were (1) loans for housing and cars, (2) competitive salary, (3) hardship allowance for workers working in a particularly challenging environment, (4) improved communication and infrastructure with utilities, and (5) attending workshops [capacity building]. Most health workers stated that they live in overcrowded conditions, are having to share accommodation, with limited access to water and electricity and communication. Some are forced to rent houses as accommodation is inadequate.

"*Kana munhu akaita imba ne mota anoitawo kalife karinani*, *If a person has a car and a house one lives a better life."(*District Health Officer)

"Local authorities should prioritise health worker when allocating stands."(DMO)

There seems to be general agreement that in-service trainings are a necessary incentive as these improve skills and make staff more marketable. In addition there were strong sentiments that staff should be sent to attend workshops and be given travel and subsistence (T and S) allowances which are valued as salary supplements. However, transparency in selection of participants in training is important, as the following quote shows:

"The same people are going (to workshops." (DEHO)

T&S funds are not easily available or accessible to staff members accompanying or transferring a patient to a referral facility– even when this may incur overtime- and one DNO stated:

"…..Travel subsistence funds must be made available for staff [sic transferring a patient to another facility)…... It's a challenge right now to get T&S." (DNO)

Examples of additional incentives mentioned by respondents were that the government should provide free medical services for health workers and their families and make contributions towards educational assistance for children. The need for recreational activities was mentioned as was a desire for supplementary food hampers (containing basic commodities such as sugar, salt and cooking oil), and meals for staff during working hours. Additionally health workers requested an increase in uniform allowances – given that currently they receive $10.00 month. When it comes to remote areas, workers would like a rural allowance or hardship allowance and more leave days to facilitate access to shops and banks for example in addition to incentives. The Health Service Board continues to engage MoF on the need to reintroduce the hardship allowances.

Moreover, currently district managers are being trained in management, which should lead to improved management practices, thus influencing health worker morale. The results of this training need to be monitored to show if this improves retention and moral. Follow ups of staff trained is in progress and will be completed by end of December 2011. The results of monitoring would also allow reinforcement or adaptations to the training or support of managers.

Choices need to be made between all these options, in consultation with stakeholders, and in line with the available budget. Several options are further developed in the paragraphs that follow.

There are clear variations between provinces, and it is important to consider redistribution of personnel and map pre-conditions (requirements of cadres to be willing to move) to allow successful redistribution. This would need to be done jointly with representatives from the different cadres to address potential resistance to change. Options could be to differentiate pay according to remoteness and to offer preferential access to training after serving in rural areas for e.g. 3 years.

Another option could be to develop a rotation scheme or temporary placements for the most urgent provinces/districts where health workers do not want to work (seemingly this is the case in Masvingo province) from provinces where there is a surplus. In addition, MOHCW could distribute mobile phones and subsidize some air time so as to allow support by supervisors when on-site visits are not regular. Recently, experience has been gained with mobile phone use, as these were purchased for all rural health centres for use by in charge nurses under GF programme to strengthen health information.

For the longer term, an option is preferential recruitment of students from those provinces with the highest vacancy rates for specific cadres for student fellowships for professional health education. This would however, also require good planning in terms of dealing with the employment freeze and thus collaboration with the Ministry of Finance and the Ministry of Education (MoE).

Selection of options needs to be done in consultation with different stakeholders (i.e. members of the HRH Task Force and representatives of critical cadres) to allow success and avoid resistance and any changes should be clearly communicated at all levels in the health system.

There are also large variations between cadres. For doctors, Environmental Health Technicians and laboratory personnel the vacancy rates have remained above 50%. This indicates the importance of differentiation in strategy and to develop a needs-based approach. This could be done either through a study (e.g. using Discrete Choice Experiments (DCE), developed by the World Bank) to map conditions for rural placements among different cadres or through a series of consultation meetings with the professional associations or representatives of critical cadres. It is also important to adopt a more strategic approach to MoF to approve posts so as to address the "difficult" provinces and the cadres with the highest number of vacancies. Lastly, an option would be to consider task shifting of certain tasks of e.g. EHT to nurses, but this also needs a careful preparation and consultation process.

6 Costing of Options

At this stage it is not practical to undertake a detailed financial analysis of Options since much will depend on the successful completion of Phase 1 and 2. It should be highlighted that these costs are indicative: they depend on the willingness of the HSB and MoHCW to undertake much of the work in-house, For the purpose of planning it is envisaged that 75% of the resources used for the main activities will be supplied at "marginal" cost (e.g. with only incremental costs of DSAs and travel) whilst the remaining inputs will be provided by consultants largely based in Zimbabwe or the region. It is however, very important and it would be better to spend more – potentially doubling the cost – to finalise Phase1 effectively. Of equal importance is an adequate buy-in to the process. Zimbabwe can only deliver effective healthcare with good buy-in to the reforms and strengthening processes by key stakeholders, especially the HSB, MoHCW and the MoF and MoE. In addition mission hospitals and professional bodies must be involved. This all takes time which is why it is probable that the minimum time of 7 months for Phase 1 may be unrealistic; a one-year timeframe should be allowed. The second stage can be moved forward conceptually, and essential groundwork can be undertaken. However, the costs of this have yet to be estimated.

Implementation will take much longer. Staff have contracts and commitments, and the real challenges start when contracts are renewed and staff are expected to move to areas of greatest need. This process could realistically start early in 2013 and would require an implementation period of not less than two years. The mid-term objective should be to reposition the sector to meet its HR and service delivery challenges by mid-2015.

Given this timeframe, the current withdrawal of the HHWRS on the basis agreed with the Global Fund appears unrealistic. It is unlikely, based on current performance[14] that the fiscal position would allow the envisaged scaling up of funding to health workers from the Government's own resources, whilst meeting the non-wage funding shortfall within the sector, unless the GoZ restructures its priorities to a very substantial degree. This seems improbable.

It is therefore desirable to identify an extension to the existing HHWRS by two (or preferably three) years The taper, as envisaged by the Global Fund, seems a rational way of handling withdrawal by the donors, but is occurring too soon. However, it should be envisaged that any extension to the HHWRS would be on the basis of a "compact" which would represent a contractual agreement to move to proper needs-based planning within the sector, to optimize resources in an environment where financial constraints will continue to be tight for the foreseeable future, and where health outcomes need to be improved.

Table 13: Preliminary Costing of Options

Phase	Tasks to be undertaken	Preliminary budget	Assumptions
Stage 1: Establish-ment Review	Background documentary review and analysis	20 person days US$1,000 per day = US$20,000	Duration: 15 days Mobilisation assumes TA can be recruited without a tender process
	Establish Steering Group and subsequent oversight meetings	To be determined	
	Select sample size and location (assume 3 facilities at each level in six provinces, including mission hospitals)	Envisaged sample 18 facilities per province = 108 facilities. Average resources needed: 3 days per hospital, 1 day per polyclinic/clinic = 144 person days 36 consultancy days @ US$1000 per day US$36,000 144 days @ US$200 (DSA plus vehicles) = US$28,800 Sub-total: US$57,600	(Duration 60 days) Assume HMB/MoHCW provide 75% of input from internal resources
	Data analysis , scaling up to national; stakeholder negotiations Analysis of needs based on the Basic Health Care	Provincial and central workshops US$60,000 incl DSA.	(Duration 90 days)

[14] See, for example, the IMF's 2011 Article IV Review

	packages. Analysis inputs and workshop facilitation	Inputs similar to those above sub-total US$36,000	
	Establishment gap analysis: Finalisation of gaps based on current numbers in post by cadre, and needs by service provision. Preparation and finalization of staff management database.	US$30,000 in TA costs Little travel required. IT related hardware and software US$20,000 (assumes central operation only)	(Duration 45 days)
Total costs Phase 1	Subtotal: fees (external support only) US$122,000 Other inputs, DSA, travel workshops, IT = US$108,800 Grand total: UDS$230,800		Minimum total elapsed duration 210 calendar days or 7 months
Stage 2: Develop a Vision and Strategy for Retention	Incentive harmonization study: Review and costing of current non-financial incentives (accommodation, utilities where provided etc), Identification of accommodation gap or deficit.		Qualitative survey completed and analysed prior to start

End of Report

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Annex 1: Terms of Reference

Impact assessment of the Zimbabwe Health Worker Retention Scheme

1. Background:

Zimbabwe has experienced an unprecedented decline in health service delivery due to the mass exodus of skilled workforce in particular from the public health sector. This adversely affected the health delivery system and consequently health outcomes of the Zimbabwean population. In response, the Health Service Board (HSB) and the Ministry of Health and Child Welfare (MOHCW) and some funding partners instituted the "Health Worker Retention Scheme" in 2009. The goal of the retention scheme was to reverse the outward migration of health staff from the country; and ensure that new trainees entering the system from the clinical training schools are larger than the numbers leaving the sector.

Before the inception of the Health Worker Retention Scheme two main funding streams namely the Vital Health Services Support Programme (VHSSP) funded by the European Union and the Global Fund Round 5 were supporting Human Resources for Health. Both schemes were highly successful in retaining and attracting health workers in the relevant posts.

The VHSSP originally targeted 3 districts in each of the 8 provinces (i.e. 24 districts), avoiding overlapping and duplication with the GF and ESP (Expanded Support programme on AIDS) supported districts. VHSSP commenced operations on 17 September 2007, providing material inputs (vehicles, equipment, building renovations) as well as allowances to an average of 7-8 members of the District Health Executive in each of the 24 districts.

Under the Global Fund Round 5 salaries were paid to selected staff in 22 districts, primarily those associated with the introduction and scale up of ART. The supported staff per district were the District Medical Officer, District Nursing Officer, selected clinicians, 2 Laboratory Scientists and 2 Pharmacy Technicians. In addition, the position of Provincial Epidemiologist and Disease Control Officer (PEDCO), which is central to all three diseases that the Global Fund focuses on, was also supported.

Following the success of the two schemes the MOHCW and the Health Service Board in November 2008 proposed a harmonized Human Resources Retention Scheme (HRRS). Several Donors (EU, DFID, Irish Cooperation, CIDA, SIDA, and UNICEF) supported the proposed initiative for the retention of health workers and Crown Agents (CAs) was contracted as the paying agent. Unlike the two district specific schemes before, this was a nationwide harmonized health worker retention scheme providing top-up allowances to all health workers. These allowances were to be paid with effect from January 2009, though in practice the first payments were made in March backdated to January. With the advent of the Government of National Unity in February 2009 the situation stabilized to the point where government was able to pay $100 per month to all staff. In the light of the improved position of government payments, and the constraints on overall funding, the initial policy was revised to limit retention payments to those in grades C5 and above with effect from April 2009. The government subsequently introduced new pay scales expressed in United States dollars, so that health workers in the higher grades now received both a government salary according to grade and a retention allowance which is variable with the grade and urban or rural location.

From October 2009 GF Round 8 has been financing the health retention scheme and retained CAs as the paying agent. Additional funding from DFID and from the ESP has been utilized to fill gaps.

A funding application to the Global Fund for the Health Systems Strengthening under round 10 that also included a substantial request for the Health Retention Scheme was rejected and this non-awarding of the grant is a threat to the scheme. While the MOHCW and key stakeholders attest that the Health Retention Scheme has been vital to health delivery in Zimbabwe there has been no health impact assessment that critically analyze and tracks the investments made to the scheme, the total numbers of human resources supported, the impact of the scheme on health outcomes, sustainability of the current scheme and a proposed exit strategy that the Government of Zimbabwe will adopt if external support is no longer available.

Information on Human Resources for Health (HRH) is crucial for any planning for Human resources. The consolidated staff returns are available at Head Office Ministry of Health and Child Welfare on establishment strength versus he authorised establishment for members of the Health Service as well as for health workers in mission and council facilities. The Ministry is working on a programme to strengthen the data base for the Health Workers with support from the European Commission and the Centre for Disease Control (CDC). This is a phased programme aimed at having a current data base for all health workers and linked to professional health councils where applicable. The Salary Services Bureau (SSB) keeps a record of all health workers paid a salary by government.

An HRH Country profile was developed for the country although it has limited information on the health workers in the private sector. This is the initial stage in establishing a Health Worker Observatory which will be a repository of updated information on health workers for informed decision making.

Since the inception of the Health Worker Retention Scheme databases have been kept by the Ministry and the Health Service Board with the cleaned data bases for the retention scheme being kept by Crown Agents (the paying agent). Each health facility or benefiting health institution would have copies of its own data bases for health workers who were paid through the scheme.

2. Objectives

The main purpose is to assess the impact of the health worker retention scheme (HWRS) to date and to provide recommendations for the way forward.

This consultancy will:

i) Assess the relevance, efficiency, effectiveness, sustainability and impact of the national health worker retention scheme, according to OECD DAC evaluation guidance; and,

ii) Provide a comprehensive analysis of potential options for the retention scheme, with clear recommendations for preferred options going forward.

The main intended users of the deliverables from this assessment are the MOHCW, Health Service Board (HSB) and donors, particularly DFID, UNDP, EU and the US Government through CDC Zimbabwe.

The assessment will focus on the period between 2007 (prior to the start of the retention scheme) to date. The final deliverables will include documentation of the

entire period as well as highlighting decisions and impact at certain key points when changes to the retention scheme were made.

These services are ultimately for the benefit of the Zimbabwean people, MOHCW, and Health service board. While the assessment will look at the success of the retention scheme in retaining health workers at post during a difficult transitional period, it will also look at any the health impact the scheme has had on poor people in Zimbabwe.

3. Scope and Methodology

This assessment will utilize both qualitative and quantitative methods including but not limited to in-depth interviews, desk reviews and review of documentation e.g. the health worker retention scheme database. Key stakeholders and beneficiaries e.g. HSB, MoHCW, donors, health workers and users of health facilities will be interviewed.

The Consultants will present details of the work plan for the assessment based at the outset. After a period of 1 week preparation/desk review/reading time the consultants will provide proposed methodology and tools to the HR taskforce for its approval before commencing field work. The consultants will be given up to 10 weeks to complete this assignment.

The assessment will focus on the DAC evaluation criteria and will assess trends over time. The issue of equity should be considered across the entire assessment and should be covered under each of the DAC evaluation criteria set out below.

3.1 Assessment Questions

3.1.1 The impact assessment will seek to answer a range of questions. Below are some suggested areas of enquiry but the consultants should include but not feel limited to these areas:

Relevance:

- What are/were the vacancy rates within the public health sector?
- What is the ratio of retention scheme funded posts to the entire personnel in post?
- What was the vacancy rate before the Health Worker Retention Scheme and the vacancy rate after the Health Retention Scheme was in place? Discuss the critical changes that have occurred before and after the establishment of the Health Worker Retention Scheme taking into account geographical variations and variations across areas of specialty.
- What the geographical distribution and the urban/rural split of positions supported by the HWRS
- What is the likely estimate of the deadweight cost of the scheme (i.e. funding to staff that would not have left post) taking into account the structural changes in the Zimbabwean economy
- What would have happened or was happening to the health system without the implementation of the retention scheme?
- Confirm the number of health workers (by health professional category) on the retention scheme
- Was the approach taken by Zimbabwe in the development of the HWRS appropriate, relevant?

Effectiveness

- Assessment of the extent to which the objectives of the Health Retention scheme have been achieved and determination of the reasons why objectives are, or not being achieved.
- Analysis of the effectiveness and impact of the different approaches used through out the different stages of the scheme from when it started to date. (Including the recent 25% cut and the grades exclusions).

Efficiency

- What was the annual cost of the Health Worker Retention Scheme?
- Critically analyze the investments made by funding partners and by the GOZ to the HWRS, making a comparison of levels of investment by each?
- What are the economic projections for the Health Worker Retention Scheme with or without external support from funding partners? What are the implications of this?

Impact:

- What are the benefits of the HWRS in terms of health impacts attributable to the scheme?
- Has there been a significant change in the utilization of health services by the Zimbabwean population attributable to the adoption of the Health Worker Retention Scheme?
- Which positive outcomes can attributed to the health worker retention scheme, in which geographic areas, areas of specialization and why? [It will be up to the consultants to propose robust methodology to describe how the issue of attribution will be assessed. This methodology will need to stand up to scrutiny]

Sustainability

- What are the future exit strategy recommendations to the GOZ in relation to the current numbers in post and post establishment (scenarios can be suggested)?
- Was the scheme implemented in a manner which focuses on affordability and on the sustainability of health impacts after the current funding sources from donors are exhausted?
- Was the scheme developed and undertaken in close collaboration with relevant national and local authorities?
- Are there mechanisms or commitment from government to continue to fund the scheme and results with the exit of donor funding?
- Did the implementation modalities strengthen the delivery of health care or the organizational capacity of relevant national and local authorities or organizations responsible for human resources for health?
- What options are available for absorption of the HWRS into the national budget in the medium term, taking into account the overall policy priorities and the fiscal outlook.
- Is it reasonable to expect the project to achieve sustainability or level of ownership during the funding life of the scheme given the internal and external factors?
- What could be done to improve the sustainability of the scheme's results or impacts?

3.1.2 The analysis of various options/scenarios and their implications for Zimbabwe going forward could include but should not be restricted to the following:

- Retention scheme payments decreasing as GOZ salaries increase
- Removing lower layer/s of the current establishment from the scheme
- Removing % from all current recipients
- Focusing on some geographic areas more than others
- Focusing on some underrepresented cadres
- Stopping/exiting from the retention scheme

Etc

All options will need to be clearly outlined, with a comprehensive analysis of the implications (including costs), pros and cons of each option analyzed.

4. Time frame and Resources

A total of 35 working days starting on the 20th of June 2011 are envisaged for this work including data collection, analysis and presentation of findings and finalization of the report. While DFID Zimbabwe has not reserved any allocation of resources for an extension of the assessment beyond 35, an option of an extension maybe considered and agreed based on unforeseen circumstances.

DFID will not reimburse costs related to normal tools of trade e.g. laptops, but will reimburse project expenses such as cost of printing, workshops, etc.

5. Outputs

A list of deliverables as well as frequency of delivery and recipient of deliverables pertaining to this contract are as follows:

Work plan / Methodology	1 electronic copy	27 June 2011	HR taskforce
1. Health Worker Retention Scheme impact	2 Hard copies & 1 electronic copy	1 August 2011	HR taskforce
2. A report analyzing key options for human resources for health for Zimbabwe providing key recommendations for going forward.	2 Hard copies & 1 electronic copy	1 August 2011	HR taskforce

6. Travel

DFID to fund the international travel for international consultants on economy class.

UNDP/GFATM to fund all in country travel costs for any locally hired enumerators.

UNDP GFATM to provide vehicles for all in country work.

7. Team Composition, Minimum Requirements/Qualifications

The team should have the following skills and expertise:

i) Considerable experience in impact assessments/evaluations - at least 10 years of experience of conducting impact evaluations that relate to health in developing countries, good recent track record of conducting impact evaluations on health systems and policies, experience in leading a diverse team of technical experts, providing supervision and monitoring is necessary.

ii) Comprehensive HR related knowledge and skills – prior experience of HR evaluations, strong knowledge of HWRS from other countries, good understanding of international best practice as it relates to human resources for health.

iii) Health economics and health financing knowledge and skills – advanced qualifications in Economics/ Health Economics, considerable prior expertise of economics/ health economics in developing countries, good track record of conducting health economics studies or evaluations .

iii) Qualitative as well as quantitative research skills. Gender/social/poverty analysis skills.

8. Key documents/sources of data

Sources of data:
National Health worker retention scheme (HWRS) database
Health management information system (HMIS)
Human resource Management information system (HRMIS)

Documents:
Country health profile
National Health strategy 2010-2014
Vital medicines and health facility assessment (VMAHS) reports 2009-2011
Demographic and health survey (DHS)
Migration study MOHCW 2010
National HR policy, HR strategy, implementation plan and costed plan.

Further primary data will be collected by the Consultant/s.

9. Reporting

The consultant will report to a HR taskforce comprising of MOHCW, Health Service Board (HSB) and donors, particularly DFID, UNDP, EU and the US Government through CDC Zimbabwe.

The consultants will share an electronic presentation of the methodology 24 hours before the presentation of this.

First drafts of the reports will be provided to the at least 48 hours before the presentation of the consultant's findings and finalization of the report.

Within 5 days of the presentation, the consultants will provide a final version of the reports of no more than 20 pages each in word format by 1 August 2011.

10. Coordination

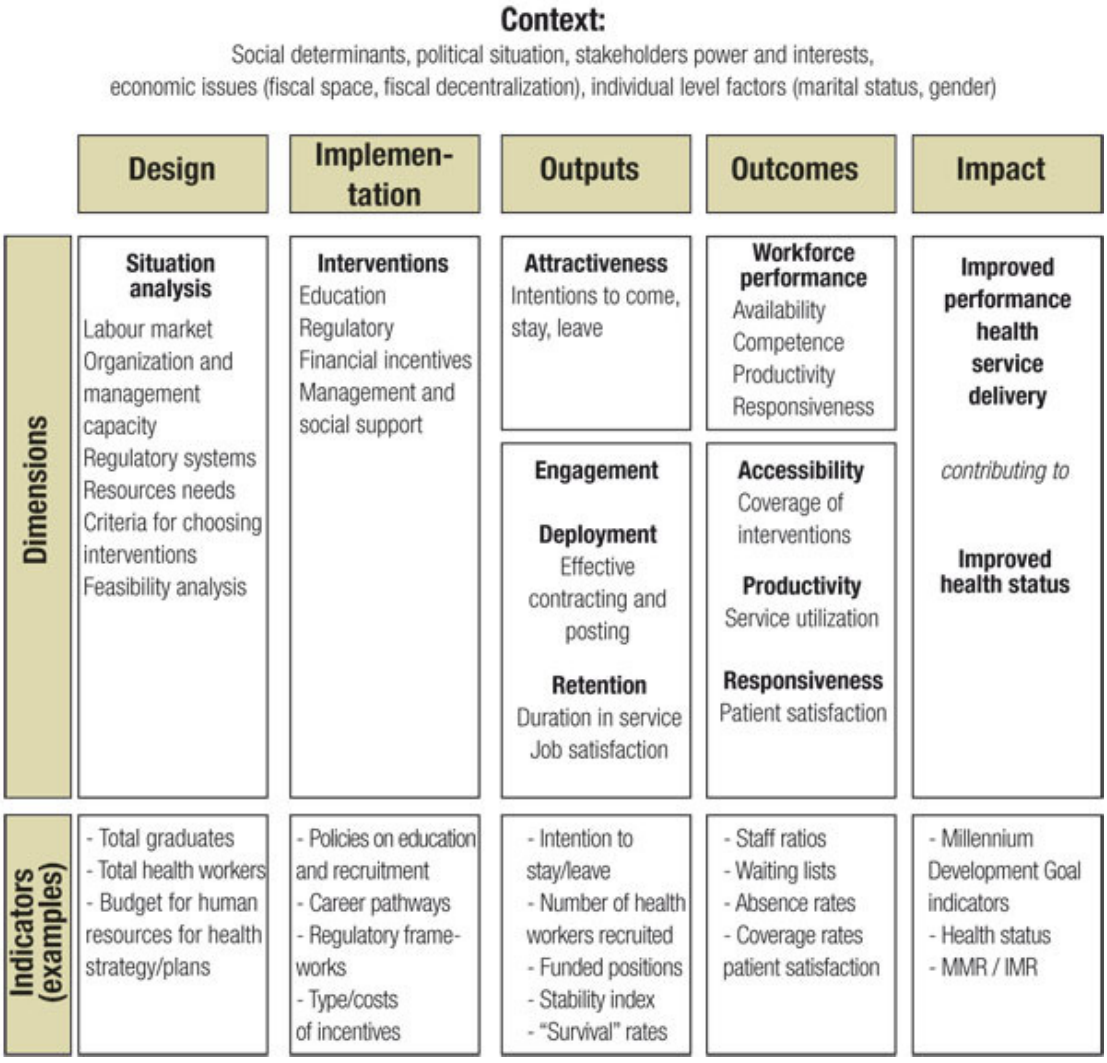
The consultants will report to DFID Zimbabwe for all technical and professional matters relating to this work. Marita Kahwema is the Project Officer and first point of contact regarding administrative matters while Louise Robinson will be responsible of all technical aspects of the work.

It is expected that a team of consultants will work on this assignment under a team leader. The division of labour among the consultants should be determined by the team leader in consultation with the HR taskforce.

Annex 2: Details of the methodology

This annex describes the definition of the DAC criteria used in the assessment, questions to be addressed and data and data collection techniques.

The evaluation will be guided by the "Global policy recommendations on increasing access to health workers in remote and rural areas through improved retention", and in particular by the principles and the conceptual framework for monitoring and evaluating retention schemes (http://whqlibdoc.who.int/publications/2010/9789241564014_eng.pdf) and visualized in the figure below:



Relevance:
Defined as: Does the scheme address the main HRH problems ?

Questions in the ToR:

- What are/were the vacancy rates within the public health sector?
- What is the ratio of retention scheme funded posts to the entire personnel in post?

- What was the vacancy rate before the Health Worker Retention Scheme and the vacancy rate after the Health Retention Scheme was in place? Discuss the critical changes that have occurred before and after the establishment of the Health Worker Retention Scheme taking into account geographical variations and variations across areas of specialty.
- What the geographical distribution and the urban/rural split of positions supported by the HWRS
- What is the likely estimate of the deadweight cost of the scheme (i.e. funding to staff that would not have left post) taking into account the structural changes in the Zimbabwean economy
- What would have happened or was happening to the health system without the implementation of the retention scheme?
- Confirm the number of health workers (by health professional category) on the retention scheme
- Was the approach taken by Zimbabwe in the development of the HWRS appropriate, relevant?

Data of interest and data collection techniques
-Use of data bases of MOHCW and CA, to summarise and interpret data on:
- Vacancy rates in public sector- overview for cadres in 2008-2010 compared to establishment
- Coverage of scheme: cadres paid and no of health workers paid per province 2008-March 2011
- Resignation data during the scheme

NB: Agreed to limit to critical cadres: doctors, nurses, lab technicians, pharmacists, pharmacist technicians and environmental health technicians
-Conduct interviews on appropriateness and relevance with key stakeholders at national and health workers and managers in selected districts.
-Document review on conducted studies/ policies and strategies

<u>Effectiveness</u>
Defined as: Has the scheme achieved its objectives?
Objectives of the scheme:
- Reverse outward HW migration from the country
- Ensure number of new graduates entering the system are larger than numbers leaving the sector

NB: Increase also from return to country

Data of interest and data collection techniques
-Use of data bases of MOHCW and CA, to summarise and interpret data on:
- Vacancy rates in public sector of critical cadres in 2008-2010 compared to establishment
- Resignation data during the scheme/ trends 2008-2010

-Conduct interviews on perceptions on success with key stakeholders at national and health workers and managers in selected districts.
-Document review on minutes of meetings

<u>Efficiency</u>
Defined as: Was the scheme implemented with the least costs and did it provide value for money?

Data of interest and data collection techniques
Use of data base of CA, to summarise and interpret data on:

- Costs of the scheme, investment made by different partners, including transaction costs, process of funding outside government system and role of Crown Agents

NB:Not feasible to collect data to make statements on cost effectiveness in relation to disease detection rates, morbidity and mortality due to coverage of scheme, its time span and changes, plus contextual factors and "dodgy baseline data"

- Based on above: Economic projections

Impact

Defined as: Has the scheme improved service delivery ?

Assumption: Availability of critical cadres increases the number of people using services

Data of interest and data collection techniques

-Use of data base of HSB, to summarise and interpret data on:

Utilisation of public services: indicators proposed per province: no. outpatient consultations, no.of institutional deliveries, no. of people initiated on ART treatment.

NB: Data base, particularly at baseline (December 2008) might not reflect accurately actual utilisation

NB: Not feasible to collect data to make statements on impact in relation to disease detection rates, morbidity and mortality due to coverage of scheme, its time span and changes, plus contextual factors and "dodgy baseline data"

-Conduct interviews on perceived impact with key stakeholders national and health workers and managers in selected districts.

-Document review of conducted studies

Sustainability

Defined as: Can the level of income (GoZ/DP) of critical cadres be maintained ?

Data of interest and data collection techniques

-Use of data base of HSB and CA, to summarise and interpret data on sources of health worker funding

-Conduct interviews with key stakeholders at national and health workers and managers in selected districts on:

- Development of scenarios and assumptions for success
- Funding opportunities
- Ownership
- Capacity building
- Improving impact and results

-Document review on recommendations to address current HRH issues

Equity and poverty will be addressed using geographical variations because of time and data constraints.

Annex 3: Methodology to extract data

Design
A retrospective descriptive and analytic design was adopted in this review with data obtained from the following sources:

- National Health Information System
- Health Services Board Database and Reports
- Crown Agents Health Worker Retention Scheme (HHWRS)
- MoHCW AIDS and TB Unit OI/ART Monthly Report Database
- National Census Data

Study and Reference Population
The study included data on all personnel employed by the MoHCW during the period January 2008 to July 2011. These findings exclude private sector clinics, and include mission and rural council facilities.

Study and Outcome Factors
The HHWRS was envisaged to contribute to the realization of improved health outcomes as a consequence of the improved numerical adequacy and retention of health workers facilitated by the scheme. The outcome of interest in this analysis was the utilization of health services with specific focus on institutional deliveries, outpatient attendance and ART initiation. The main study factor was the vacancy rates for the overall health workforce and disaggregated by cadre and geographical location, provinces.

Data Collection Methods
As previously highlighted, data for this analysis was retrospectively obtained from the above mentioned databases using various extraction methods. Of note, data was exported from the various databases into MS Excel (if not already in the format). Most of the data on staff returns and the HHWRS were already in MS Excel but were, however, in different structure and formats to facilitate meaningful comparison or basic analysis. Data manipulation was therefore conducted to establish specific variables corresponding to the study and outcome factors.

More specifically the following variables for vacancy rate analysis were developed through either computations or rearranging of database templates:Vacancy Rate, Cadre, Province and Month/Year. It is important to note that all databases for human resources information were based on separate monthly staff returns which therefore warranted initial consolidation before any meaningful analysis could be conducted. We assumed that these staff returns were correctly filled out and aggregated at the different levels.

Data on utilization was obtained as three separate databases which also underwent reconfiguration to suit the desired methods of analysis. Data cleaning was conducted by a combination of observation of the worksheets to identify errors and inconsistencies as well through frequency runs using Epi Info software. The common quality compromising aspects identified in the data sets included:

- Errors on in some formulae used to calculate vacancy rates for some specific cadres for a particular. These are likely to have arisen from copying and pasting formulae from previous month template to a current which might not necessarily be having structure of cells or tables hence resulting in the formulae picking an inappropriate cell. The main method of cleaning this was to re-do formulae for the entire rows affected.

- Absence of "Legal Values" in the databases used to capture particularly HRH information. This resulted in the same profession or cadre having to be recorded in the database with different titles e.g. Primary Care Nurse, PCN, PC Nurse and Nurse – PC. In that regard, it was therefore difficult to group cadres as they will be scattered all over and analysis would be made difficult without a filter variable.
- The current database templates for HRH information assume the role of a working document that advises on the payments, updating changes and current state of affairs but without keeping adequate record of the previous information, particularly provincial level in-post data. This is a structural flaw which does not facilitate for ongoing monitoring.

Despite the challenges associated with the location (dispersed) and structure of the data, the consultant received overwhelming levels of support from all departments and institutions housing the databases, making this analysis possible.

Data Analysis
Data was analyzed using MS Excel, Epi Info and STATA software packages. MS Excel was very useful in the data preparation and descriptive analysis focusing on trends and graphical plots. Epi Info was used to consolidate the separated database files and conduct descriptive analysis whilst STATA provided the platform for correlation analysis and significance testing.

The analysis was objective oriented with a focus on addressing the key questions in the ToRs. A Data Extraction and Analysis Schedule[15] was developed and used to aid the data collection and analysis process in this review.

Limitations
The analysis and to some extent the interpretations of the findings had some limitations due to a number of reasons. The main factors were related to data quality issues as previously outlined in section 2.4 and below:

- **Data was dispersed and incomplete:** Data used for the HRH vacancy and HHWRS analysis was mainly sourced from the HSB Database, MoHCW Staff Returns and CA HHWRS Database. It was difficult to obtain all required data to complete the analysis but rather there was need to extract data from the different databases and consolidate.
    - For instance, the MoHCW Staff Returns were able to provide establishments and in-post data disaggregated by cadres but did not provide provincial level data completely for the period under review and did not include missions and councils.. Not all the returns had data at provincial level as the templates were used to update data monthly while records of previous provincial data was not stored within the database. Data on the missions and councils had to be obtained separately Missions and Councils Staff Returns. These were updated during the assessment and only the June 2010 and June 2011 returns were presented as complete. As such, much of the vacancy analysis is focused on public sector institutions.
    - The HSB Database was in the form of consolidated reports of staff returns, which provided data at provincial and cadre level. These were therefore useful in bringing out the geographical variations, however data was provided for Oct-Dec 2010, Jan-Mar 2011 and Apr-Jun 2011 quarters only and therefore could not bring out the complete trend from before and after the HHWRS intervention.

[15] Attached as Appendix 1

  - The CA database was observed to have a detailed breakdown at cadre and provincial level but the database comprised of separate MS Excel templates for provinces/facilities (central) and months such that a complete database for year 2010 would be a consolidation of 17 (Provinces + Central/Referral Institutions) x 12 (months) databases each with at least 18,000 entries of beneficiaries under the HHWRS. That in itself presented challenges as the databases had to be adjusted to assume similar formatting before consolidation. Eventually, only six months data within the period January 2009 to June 2011 were included in analysis.
- **Inconsistencies in Data: -** Some inconsistencies were observed across and within the databases. The HSB Database (Qtr-6) reports 17,663 personnel in-post and on the scheme as at the end of December 2010 whilst the CA Database for the same period has 18,105. Despite the view from officials that the MoHCW establishment has remained unchanged over time, the Staff returns exhibit fluctuating establishments over the period under review. For instance, the January 2010 return reports an authorized staff establishment of 35,525 whilst the May 2011 return reports an establishment of 35, 677. This report makes reference to the January 2010 establishment when presenting the overall or general picture of establishment but takes into account the specific corresponding establishments when calculating the vacancy rates for the different times in the review period.
- **Inadequate Filter Variables**: - Whilst variables such as Province, District and Grade were considered in the design of the databases used in this assessment, they do not have other filter variables such as Geographical Location (Rural/Urban) and Facility Type (Public/Mission/Council). As such, it was not possible to comprehensively analyze data across these strata. Rural and urban comparison is in-fact not included in this analysis mainly due to this for it would have meant going through 18,000+ records of each HHWRS beneficiary and allocating each of their corresponding facilities to a rural or urban code.
- **Legal Values Undefined in Databases: -** Legal valuesare a set of possible values that can be assumed by a specific variable e.g. The variable “Designation” may assume the values, JRMO, RGN, PCN etc. Whilst the CA HHWRS could have provided a wealth of data for this analysis due its disaggregated nature (province, cadre, month) the utilization of its capacity was compromised due to the absence of defined legal values for the variable Designation. This meant a similar post could assume several different typewritten names e.g. Primary Care Nurse, PCN, Nurse – Primary Care. The absence of the legal values also allowed for typographical errors such as Primary Care Nurse. The overall effect of this was that one could not undertake simple descriptive analysis without having to further group the separate names falling under the designation. Due to this, it was not possible to full analyze data stratified by cadre and provinces as well as extract data on midwives from the HHWRS database.

Annex 4: People met

Ms J. Benza	HWRS project, Crown Agents
Mr. E. Boadi	M&E specialist, UNDP
Ms A. Chiranburi	Clinical Director, Howard Hospital
Dr. J. Z. Chiware	Director, Quality Assurance, MoHCW
Ms P. Chonzi	HR Officer, Health Services Board
Dr D. G. Dhlakama	Director Policy, Planning, Monitoring and Evaluation MoHCW
Mrs I. Fortes	Project Coordinator (GF) UNDP
Mrs L. Gwazai	Human Resources Assistant, Establishment Control MoHCW
Brigadier General Dr G. Gwinji	Permanent Secretary, MoHCW
Ms R. Harrison	Human Resources Assistant, Mission and Rural Councils Section, MoHCW
Mrs R. F. Hove	Director, Pharmacy Service,s MoHCW
Mr J. T. Katiyo	HMIS MOHCW
Mr L. Mabandi	Director of Finance and Administration, MoHCW
Mr C Mlambo	Database Manager, HSB
Mr C. Mataire	Administrator, Concession District Hospital
Dr P. S. Makurira	Board Member, HSB
Dr O. L. Mbengeranwa	Executive Chairman, HSB
Mr Mujuni	Human Resources Officer, Concession Hospital
Mr Ronald Mhlanga	National Health Accounts, Zimstat
Ms J. T. Muderedzi	Board Member, HSB
Ms J. Mudyara	Director, Human Resources, MoHCW
Mrs M. Mwonzora	Technical Specialist Health, Crown Agents
Mr Langa Mlalaxi	Spot Check Officer, Crown Agents
Ms Tandiwe Ngundu	Senior Human Resources Officer, MoHCW
Dr (Captain) Paul Thistle	Chief Medical Officer, Howard Hospital
Captain Irene Nyahuma	Director for Special Services, Howard Hospital
Ms N. Nyachuru	Administration Officer, Howard Hospital
Dr S. Laver	Director CCore
Dr P. Salama	UNICEF
Mr D. Somane	Deputy Director, HRH, MOCHW
Mrs L. Robinson	Basic Services Advisor, DFID
Mrs W. Takwunda-Banda	DFID
Mr P. Toigo	Economist, DFID
Mr T. U. Wushe	Managing Director CA
Mrs N. N. Zhou	Director Human Resources, HSB

Annex 5: Implementation of the HHWRS

Phase 1: January- March 2009

At the end of 2008, when the Zimbabwean health system was collapsing, many health facilities were closing and a cholera outbreak caused 4,500 people to die, various development partners, the Health Services Board (HSB) and the Ministry of Health and Child Welfare (MoHCW) discussed in the HRH Task Torce ways to revitalize the system. One major problem identified was that health workers could not afford to come to work with an estimated 20% out of 64% in post of people turning up (oral communication- draft letter from MOCHW- in file CCM-meetings) and others leaving the health sector and migrating. The vacancy rate at the end of 2008 was 46% of the establishment (MOHCW staff returns Jan-Dec 2008)[16]. In addition, those who stayed were not able to pay for transport costs to come to work or to eat, leaving clinics and hospitals without staff to provide services.

During this first phase, the scheme was clearly an emergency plan and development partners pooled funds together to pay every health worker an allowance in foreign currency, conditional to attending to work. Amounts ranged from 30 USD for the lowest grades to 850 USD for DMOs. Health workers working in public, mission and council health facilities were paid as well as personnel at head quarters and nurse tutors. Negotiations with the banks by CA allowed health workers to open foreign currency accounts, but the process of opening these accounts as well as having the funds freed up by different donors caused at the start a backlog of two months in payment.

This scheme ran from January 2009-March 2009, it covered all eligible health workers, some 29,000 at that time The results of this first period have been well documented and is likely to have contributed to health workers returning to work (data see chapter…). Funding in 2009 remained difficult with different donors donating financial resources; the scheme was acknowledged by the HRH Task Force as a high risk venture (Minutes HRH Task Force, August, 2009).

Phase 2: April 2009- December 2010

In March 2009 the Zimbabwean economy dollarized and the economic situation stabilized. The government was able to alleviate the health workers' problems by paying each worker 100 USD per month. This was effectively paid from March 2009 onwards.

In the meeting of the HRH Task Force in March, projections of cost implications when continuing the payments were provided and the scheme appeared to cost more than the resource envelope covered. During this period, the government introduced new salary scales, based on USD, further alleviating the financial problems of the health workers. Because of this, the HRH Task Force felt that the emergency scheme could be reviewed. It was decided to exclude health workers working in city council health facilities as their earnings were higher than health workers employed by HSB, mission facilities and rural councils. It was also decided to exclude health workers from Grade C4 and below- the rationale being that these workers were less likely to leave.

Changes in the scheme were communicated by MOHCW to the health workers through circulars and meetings. It is from the documents and discussions not clear if

[16] For all staff cadres in the ministry

all health workers received the information, nor have their reactions to this been documented.

Although no direct attribution can be given between a decline in vacancy rates and payment of incentives; during the implementation of the scheme, at the end of 2009 the vacancy rate for all health workers was 21% of the establishment and at the end of 2010, this vacancy rate had further reduced to 18%.

Crown Agents conducted spot checks to monitor presence at work of health workers on the scheme and conducted a physical verification check in November 2009, showing 87% presence of health workers on the HHWRS. Further verifications were undertaken by Crown Agents in June 2010; July 2010 and October 2010, with the last of these identifying 89.6% of beneficiaries. The CA M&E in place showed very little unaccounted payments (0.6% in 2009), verified during an audit of CA by PWC working on contract to the Global Fund centrally.

During this phase there were some adaptations in sources of payment to health workers: The Vital Health Services Support Program (VHSSP) had a retention scheme for district health team (DHT) members in 22 districts and had harmonized its levels to those of the HHWRS, but paid these workers through their own payment systems. The 184 DHT members were included in the HHWRS from June 2009 onwards.

From minutes of the HRH taskforce Aug 2009: “During this period, ESP had to fulfil the promise leaked to health workers in ESP districts for a back pay for June to December 2008. To date almost a year has elapsed since the promise to pay was made. Ministry resolved that all health workers, at work during that period rather that sister in charge upwards be paid to avoid disharmony. The health workers can be paid for a period less than 6 months dependant on available funds and numbers to be paid. The meeting noted the importance of ESP meeting its promises but acknowledged that it was crucial for VHSSP to be allowed to clear the backlog in payment of retention allowances in the district it supports.”

From September 2009 onwards, the Global Fund (GF) funded the scheme, as part of Round 5 (period September 2009-July 2010) and Round 8 (August 2010- to date). Round 8 included a 2 year-financing of the retention scheme, although there was a financing gap. An agreement was signed between HSB and GF, payment of top-ups was conditional and needed an exit strategy, as GF has no mandate to pay for salary top-ups.

The exit strategy agreed upon by MoHCW and GF would cover a period of 4 years, with an annual 25% cut in allowance, and a commensurate increase in basic salaries. Important to note is that the retention allowance is tax free, and basic salaries are taxed, probably leading to a net loss for health workers. In a letter of 16th February 2011 the Global Fund advised that it would impose a cap on the number of workers covered by the scheme at the level of 18,860. As noted in the VfM assessment the Global Fund /UNDP has declined to fund Crown Agents to undertake verification work in 2011. This means that until the HSB auditors are up and running, the degree of independent oversight has diminished, given that the PWC annual reports are provided to Geneva, and not used as an ongoing retention scheme check (for example removing those who have died of left post)..

In August 2010, Crown Agents included in their payment scheme health workers who were originally paid by the Global Fund through the AIDS-Council.

Phase 3: January- July 2011

In January 2011, the first 25% reduction in amounts to be paid to health workers were made, while at the same time the government increased the salary and allowances of the health workers.

Health workers were informed about the reductions through circulars and meetings (oral communication). There is no documentation about the reactions to these changes among the health workers.

Up to May 2011, it did not seem to have influenced the overall vacancy rates as at the end of May 2011, the overall vacancy rate was 17% (MOHCW staff returns, 2011).

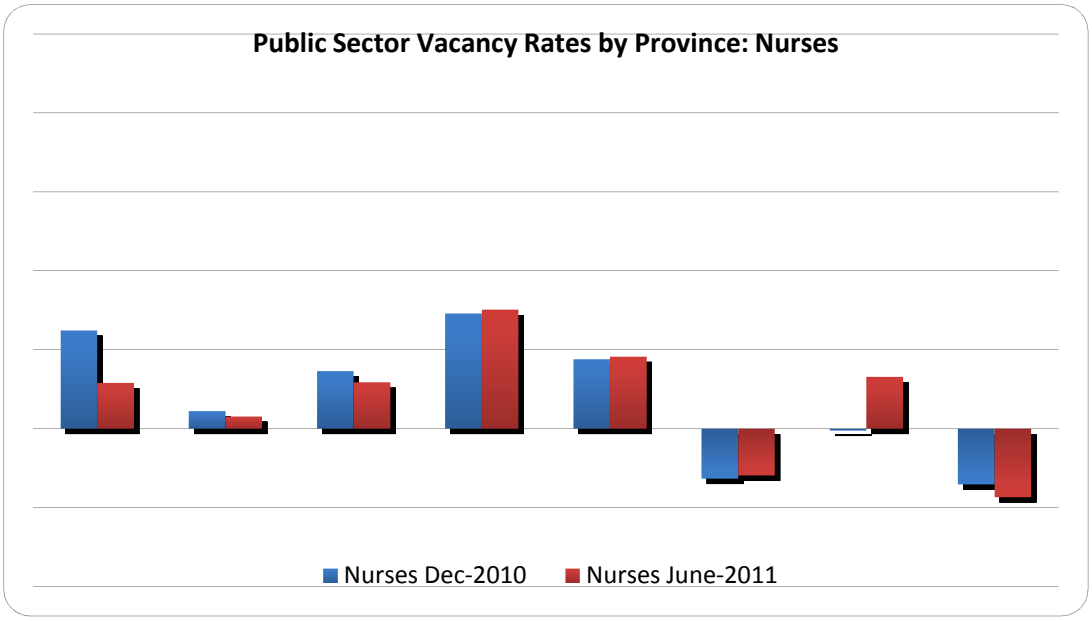
From January 2011 onwards the Health Services Board has become responsible for spot checks and the HRH department of the MOHCW carries out mini-audits, checking the number of personnel in place in health facilities in the country. Crown Agents, taking account of fiduciary risks, wrote to UNDP requesting that an annual verification process should be initiated, but this has not been approved, with the Global Fund relying on HSB and MoHCW processes, together with the end of year PWC verification.

Annex 6: Detailed tables

Table 6.1: Authorised establishments for Critical Cadres per province

PROVINCE	NURSES	DOCTORS	EHT	PHARMACY	LABOR-ATORY	TOTAL
MANICALAND	1033	35	200	27	25	**1320**
MASHONALAND CENTRAL	794	51	258	26	22	**1151**
MASHONALAND EAST	975	62	242	26	34	**1339**
MASHONALAND WEST	794	56	243	26	22	**1141**
MATABELELAND NORTH	618	32	173	19	30	**872**
MATABELELAND SOUTH	893	41	177	24	32	**1167**
MIDLANDS	1156	50	204	27	31	**1468**
MASVINGO	1131	79	214	26	29	**1479**
CHITUNGWIZA	396	56	0	8	14	**474**
MPILO	682	157	0	15	49	**903**
UBH	682	201	0	21	40	**944**
INGUTSHENI	260	21	0	8	0	**289**
PARIRENYATWA	879	335	0	32	60	**1306**
HARARE HOSPITAL	1274	398	0	30	45	**1747**
COLLEGE	9	129	0	11	152	**301**
HEAD OFFICE	33	12	9	16	40	**110**
ZNFPC	85	2	0	0	0	**87**
MISSIONS & COUNCILS	3169	89	102	9	39	**3408**
TOTAL	**14863**	**1806**	**1822**	**351**	**664**	**19506**

Figs 6.17 and 6.2: Public Sector Vacancy Rates by Province: Nurses; Doctors



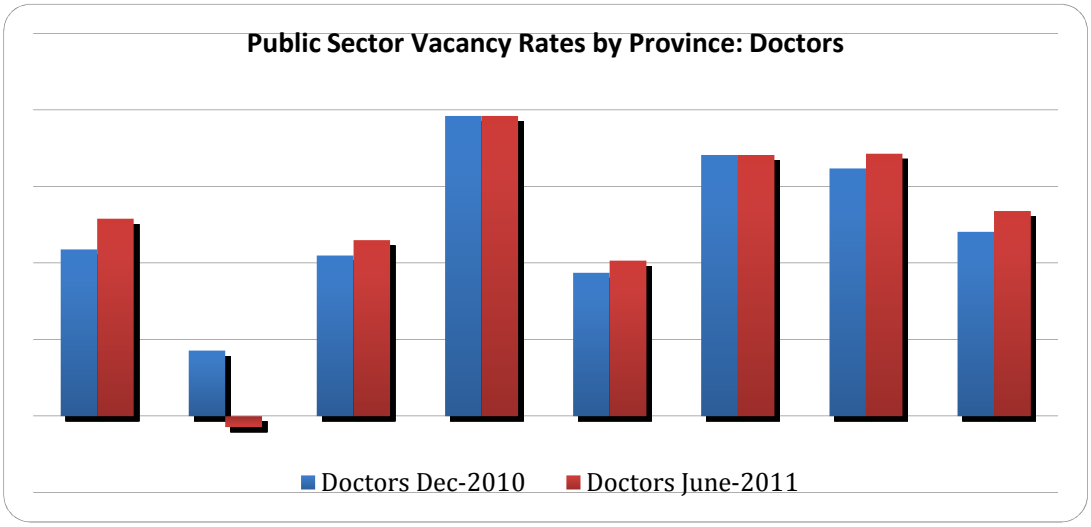


Table 6.2: Health Worker Density

Source: Source: Population projected from Zimbabwe National Health Profile 2008 (1.1% Annual Growth), In-posts: Heath Services Board – Quarter 6 Report

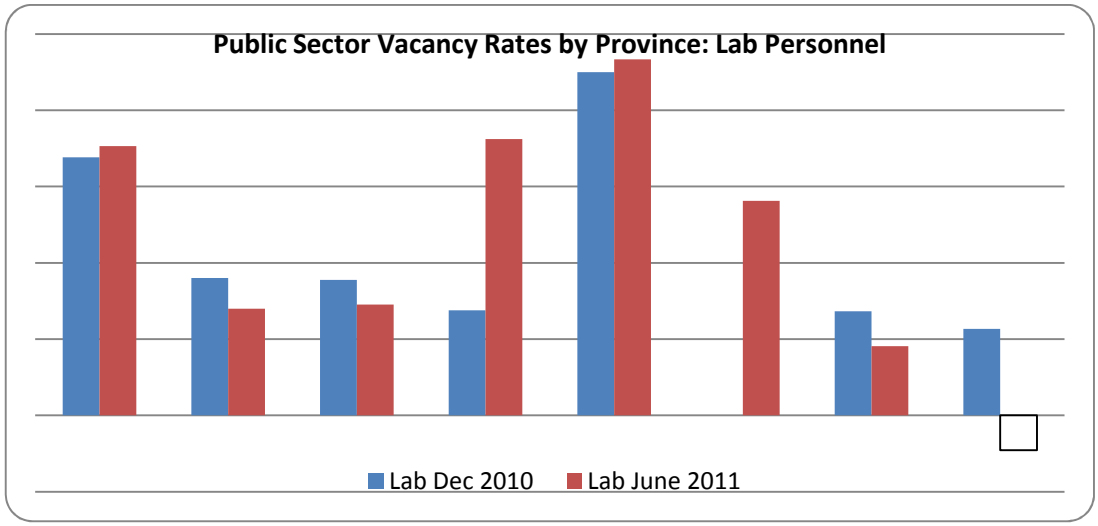
Province	Population	In-Posts		Actual Density per 1, 000 Population		
	2011	Doctors	Nurses	Doctors	Nurses	Combined (Doctors, Nurses)
Manicaland	1721018	36	1001	0.02	0.6	0.6
Mashonaland Central	1091920	16	690	0.01	0.6	0.6
Mashonaland East	1236698	30	862	0.02	0.7	0.7
Mashonaland West	1343385	26	932	0.02	0.7	0.7
Matabeleland North	773284	19	505	0.02	0.7	0.7
Matabeleland South	716359	13	999	0.02	1.4	1.4
Midlands	1605907	27	1020	0.02	0.6	0.7
Masvingo	1448438	17	790	0.01	0.5	0.6

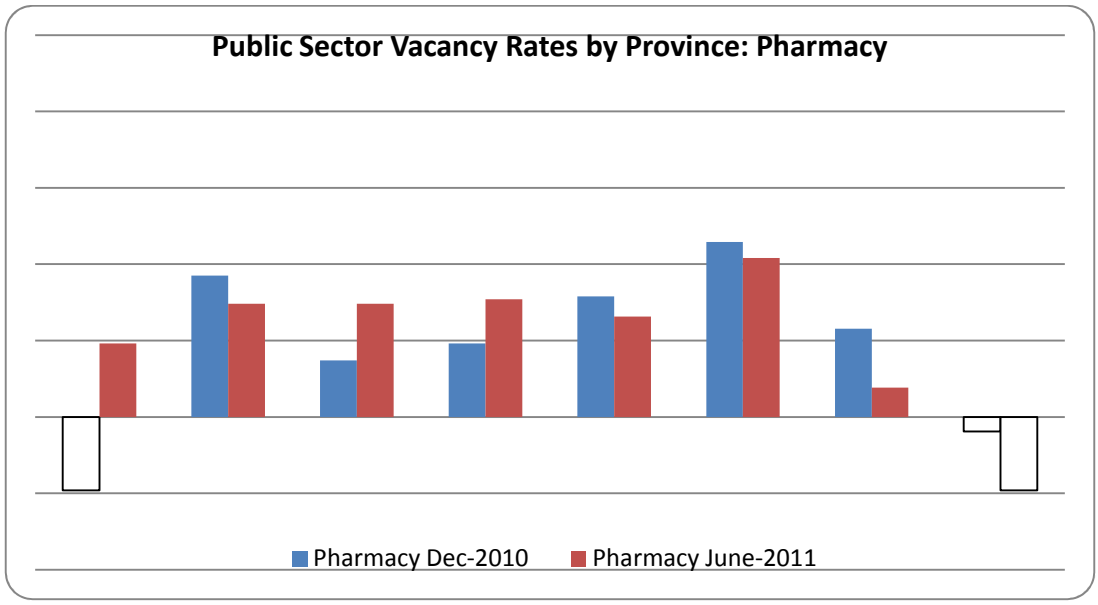
Table 6.3: Vacancy Rates by Province June 2011: Public Sector

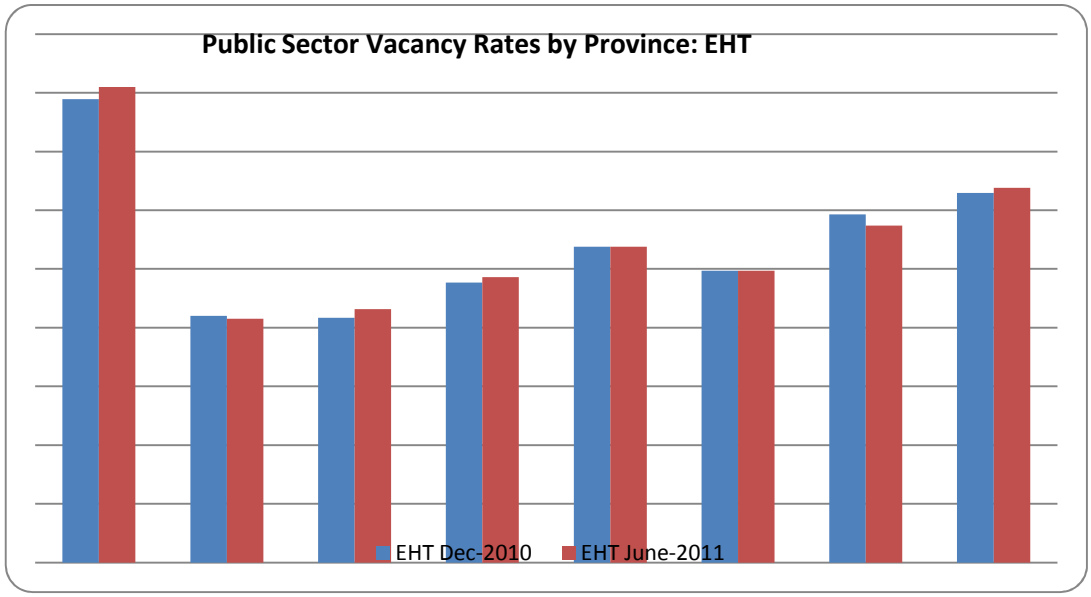
PROVINCE	Vacancy Rates (%)				
	NURSES N_{Est}(Vac. %)	DOCTORS N_{Est}(Vac.%)	EHT N_{Est}(Vac. %)	PHARMACY $N_{Es.}$(Vac. %)	LABORATORY $N_{Est.}$(Vac. %)
MANICALAND	1033 (3)	35 (-3)	200 (42)	27 (30)	25 (28)
MASHONALAND CENTRAL	794 (13)	51 (69)	258 (57)	26 (8)	22 (18)
MASHONALAND EAST	975 (12)	62(52)	242 (81)	26 (19)	22 (71)
MASHONALAND WEST	794 (-17)	56 (54)	243(64)	26 (-19)	22 (-9)
MATABELELAND NORTH	618 (18)	32 (41)	173 (54)	19 (26)	30 (93)
MATABELELAND SOUTH	893 (-12)	41 (68)	177 (50)	24 (42)	22 (56)
MIDLANDS	1156 (12)	50 (46)	204 (43)	27 (30)	31 (29)
MASVINGO	1131 (30)	79 (78)	214 (49)	26 (31)	29 (72)

Source: HSB Quarter 6 Report

Figures 6.4 – 6.6: Vacancy rates per cadre in provinces







Source of Data: Health Services Board, 04th and 06th Quarter

Table 6.4: Key data on health services of a sample of health facilities

	April- June 2009 N= 1313 (completed assessments)	October-Dec 2009 N= 1235 (completed assessments)	July-December 2010 N=1286 (completed assessments)
At least 50% of essential medicine in stock	44%	91%	90%
Stock outs of vaccines	30%	20%	6%
Functional maternity unit[17]	85%	99%	99.5%
User fees for delivery services	For free: not available < 5 USD: 60% 5-20 USD: 31% > 20 USD: 10%	For free: 53% < 5 USD: 15% 5-20 USD: 25% > 20 USD: 7%	For free: 52% < 5 USD: 25% 5-20 USD: 18% > 20 USD: 6%

Sources: VMAHS, Round 1, Round 4 and Round 7

Table 6.5: Institutional Live Births (ILB) in Public Sector Institutions: Jan 2008 to June 2011

Province	Institutional Live Births per Expected Births				Percentage Growth
	2008	2009	2010	2011[18]	
Manicaland	50.2	59.6	67.2	74.8	49
Mashonaland Central	56.7	54.9	39.0	80.9	43
Mashonaland East	52.8	53.7	72.0	77.8	47
Mashonaland West	55.7	50.0	66.5	71.6	29
Matabeleland North	41.6	47.8	67.3	77.5	86
Matabeleland South	53.9	51.2	61.5	69.9	30
Midlands	38.8	40.7	54.0	72.2	86
Masvingo	79.5	72.0	91.7	89.5	13
Harare	68.3	55.7	86.6	70.6	3
Bulawayo	33.0	28.3	49.5	77.0	134
Average ILB Rate	53.0	51.4	65.6	76.2	44

[17] "Functional maternity clinic is loosely defined here to imply a facility that is offering any of the maternity services (ANC, Post Natal, and Post natal). However, this does not include adherence to recommended quality standards"(VMAHS, 2010:11)

[18] Based on January to June 2011, hence half of expected annual deliveries

Fig 6.7: Institutional Live Births in Public Institutions

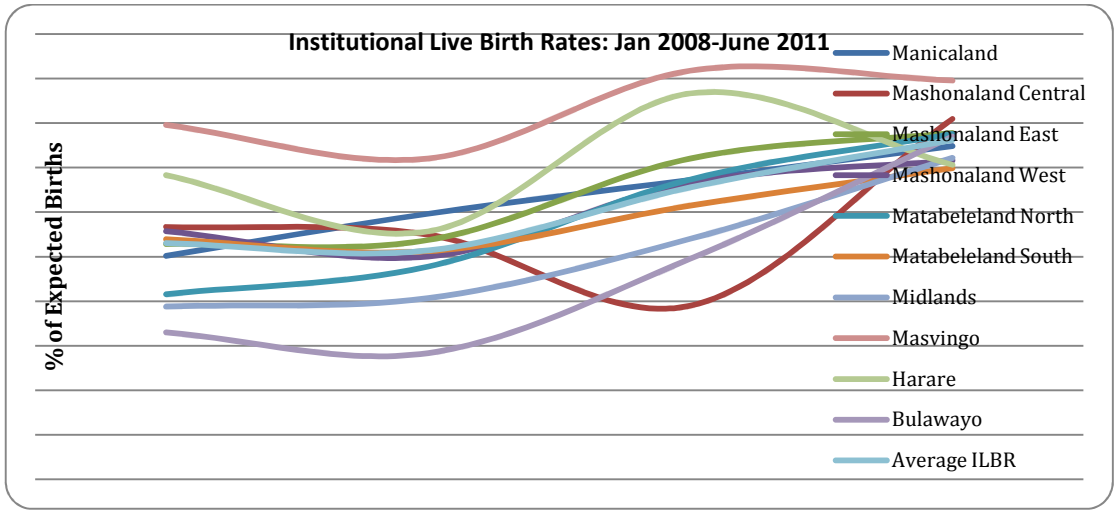
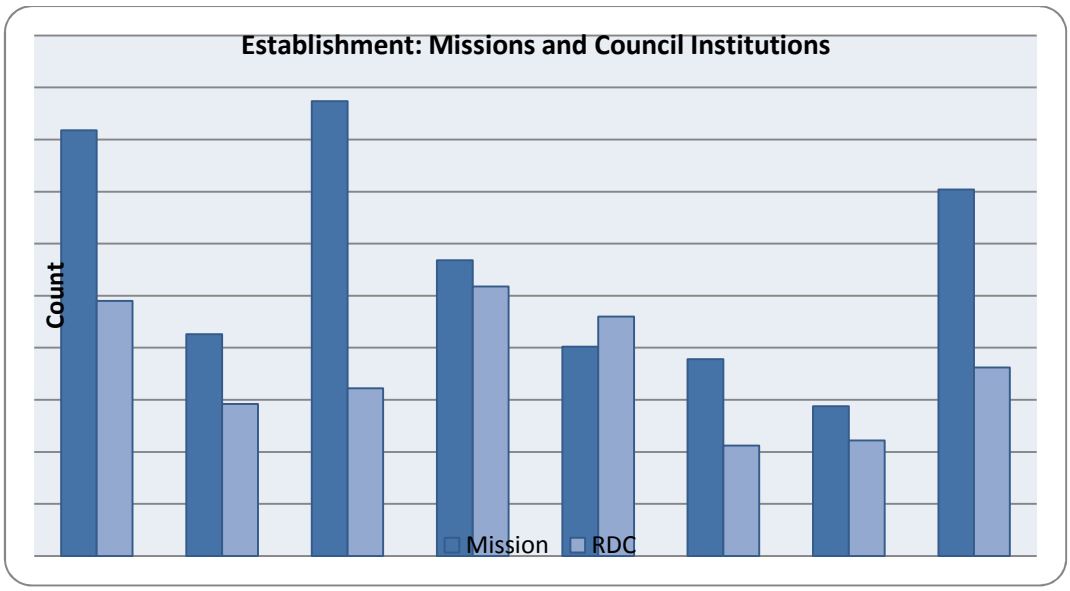


Fig 6.8: Establishment: Missions and Council Institutions



Source: MoHCW, Missions and Councils Staff Returns July 2011

Table 6.7: Annual Institutional Outpatient Attendance Rates per Province

Province	Attendance Rate (%)		
	2008	2009	2010
Manicaland	122.9	124.3	92.0
Mashonaland Central	125.7	116.8	27.1
Mashonaland East	105.7	106.6	92.7
Mashonaland West	78.2	63.7	60.4
Matabeleland North	106.8	120.7	98.4
Matabeleland South	100.4	100.6	85.3
Midlands	68.8	69.4	65.6
Masvingo	126.5	124.7	103.5
Harare	60.5	59.1	106.5
Bulawayo	101.8	83.4	81.2
Average	**99.7**	**96.9**	**81.3**

Fig 6.9: Quarterly Art Initiation Rate Trend Analysis

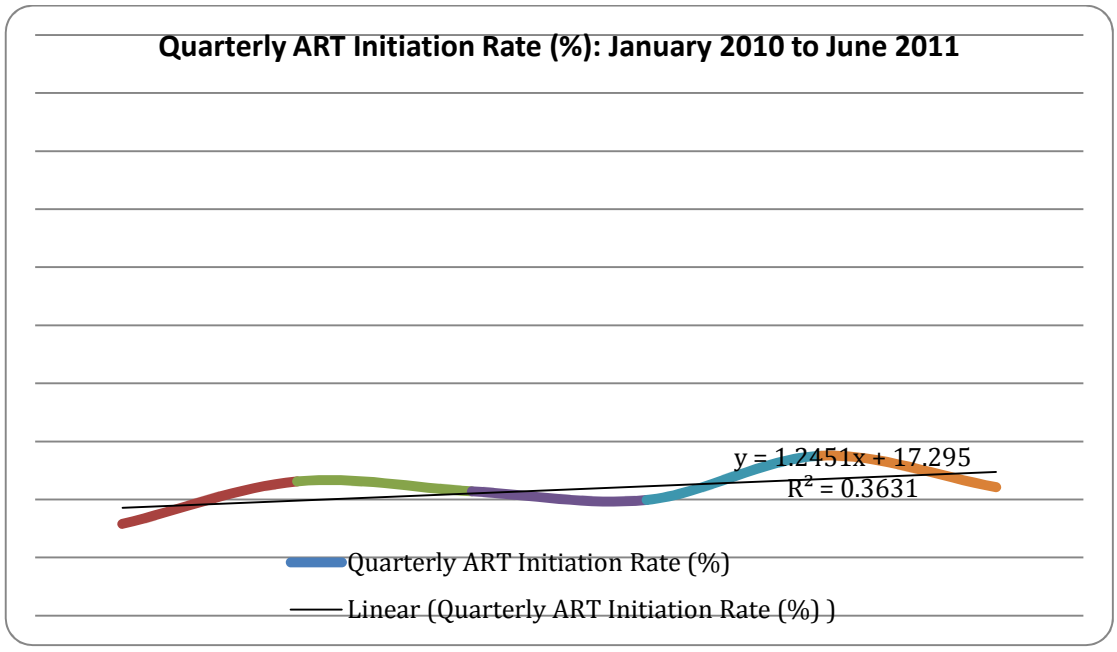


Table 6.8: ART Initiation Rates

Indicator	Jan-Mar 2010	Apr-Jun 2010	Jul-Sep 2010	Oct-Dec 2010	Jan-Mar 2011	Apr-Jun 2011
Number of patients newly eligible for ART to date	159555	132619	137720	128242	121353	131860
Number of patients newly starting on first line (D4T+3TC+NVP) this period	25167	30662	29502	25548	33425	29187
Quarterly ART Initiation Rate (%)	**15.8**	**23.1**	**21.4**	**19.9**	**27.5**	**22.1**

Annex 7: Vacant Posts by Province between April and June 2011

Harare	**Bulawayo**	**Mash. East**	**Mash. Central**	**Mash. West**	**Manicaland**	**Midlands**	**Masvingo**	**Mat. North**	**Mat. South**
Nurses-RGN total posts	1450	287	164	218	512	1104	861	648	477	335
Nurses-RGN filled posts	1310	248	122	157	475	917	660	604	298	262
Vacant	140	39	42	61	37	187	201	44	179	73
Vacant %	**9.7%**	**13.6%**	**25.6%**	**28.0%**	**7.2%**	**16.9%**	**23.3%**	**6.8%**	**37.5%**	**21.8%**
Harare	**Bulawayo**	**Mash. East**	**Mash. Central**	**Mash. West**	**Manicaland**	**Midlands**	**Masvingo**	**Mat. North**	**Mat. South**
Nurses-PCN total posts	37	14	311	287	317	293	259	308	182	301
Nurses-PCN filled posts	37	0	279	264	301	226	243	295	139	246
Vacant	0	14	32	23	16	67	16	13	43	55
Vacant %	**0.0%**	**100.0%**	**10.3%**	**8.0%**	**5.0%**	**22.9%**	**6.2%**	**4.2%**	**23.6%**	**18.3%**
Harare	**Bulawayo**	**Mash. East**	**Mash. Central**	**Mash. West**	**Manicaland**	**Midlands**	**Masvingo**	**Mat. North**	**Mat. South**
Nurses-Midwives total posts	365	72	92	73	154	191	223	93	107	77
Nurses-Midwive filled posts	301	47	59	55	128	114	162	92	61	31
Vacant	64	25	33	18	26	77	61	1	46	46
Vacant %	**17.5%**	**34.7%**	**35.9%**	**24.7%**	**16.9%**	**40.3%**	**27.4%**	**1.1%**	**43.0%**	**59.7%**
Harare	**Bulawayo**	**Mash. East**	**Mash. Central**	**Mash. West**	**Manicaland**	**Midlands**	**Masvingo**	**Mat. North**	**Mat. South**
Nurses-EHT total posts	13	3	77	102	120	173	258	105	134	125
Nurses-EHT filled posts	11	0	40	70	76	97	110	93	77	80
Vacant	2	3	37	32	44	76	148	12	57	45
Vacant %	**15.4%**	**100.0%**	**48.1%**	**31.4%**	**36.7%**	**43.9%**	**57.4%**	**11.4%**	**42.5%**	**36.0%**
Province	**Harare**	**Bulawayo**	**Mash. East**	**Mash. Central**	**Mash. West**	**Manicaland**	**Midlands**	**Masvingo**	**Mat. North**	**Mat. South**
Total	1865	376	644	680	1103	1761	1601	1154	900	838
Filled	1659	295	500	546	980	1354	1175	1084	575	619
Vacant	206	81	144	134	123	407	426	70	325	219
Vacant %	**11.0%**	**21.5%**	**22.4%**	**19.7%**	**11.2%**	**23.1%**	**26.6%**	**6.1%**	**36.1%**	**26.1%**
Province	**Harare**	**Bulawayo**	**Mash. East**	**Mash. Central**	**Mash. West**	**Manicaland**	**Midlands**	**Masvingo**	**Mat. North**	**Mat. South**
Vacant %	11.0%	21.5%	22.4%	19.7%	11.2%	23.1%	26.6%	6.1%	36.1%	26.1%
Staff received Retention	**6.7%**	**10.0%**	**74.9%**	**100.0%**	**91.9%**	**76.8%**	**82.8%**	**96.5%**	**72.2%**	**84.5%**

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