Understanding health worker incentives in three districts of Zimbabwe: survey report

Yotamu Chirwa, Wilson Mashange, Pamela Chandiwana, Malvern Munjoma, Mildred Pepukai, Stephen Buzuzi, Shungu Munyati, Sophie Witter

Working Paper No 18.

Liverpool School of Tropical Medicine, Pembroke Place, Liverpool, L3 5QA, UK

www.rebuildconsortium.com

Email: rebuildconsortium@lstmed.ac.uk

The ReBUILD Research Programme Consortium is an international research partnership funded by the UK Department for International Development.

ReBUILD is working for improved access to effective health care for the poor and for reduced health costs burdens in post-conflict and post-crisis countries. We are doing this through the production of high quality, policy-relevant research evidence on health systems financing and human resources for health, and working to promote use of this evidence in policy and practice.

ReBUILD is implemented by a partnership of research organisations from the UK, Cambodia, Uganda, Sierra Leone and Zimbabwe.

- Liverpool School of Tropical Medicine, UK
- Institute for Global Health & Development, Queen Margaret University, Edinburgh, UK
- Cambodia Development Resource Institute, Cambodia
- College of Medicine and Allied Health Sciences, Sierra Leone
- Makerere University School of Public Health, Uganda
- Biomedical Research and Training Institute, Zimbabwe

Disclaimer: This report is an output of a project funded by UK aid from the UK government. However the views expressed do not necessarily reflect the UK government's official policies.

Authors:

Yotamu Chirwa is leading on ReBUILD's health worker incentive research in Zimbabwe. He is currently a Senior Research Rellow at the Biomedical Research and Training Institute.

Wilson Mashange is a public health researcher working on the health worker incentives research within ReBUILD in Zimbabwe. He is a research officer at the Biomedical Research and Training Institute.

Pamela Chandiwana is a public health researcher, involved in research on health worker incentives sub study within ReBUILD in Zimbabwe. She is currently a Research Officer at the Biomedical Research and Training Institute.

Malvern Munjoma is a data analyst and was responsible for data management and processing for the health worker incentive sub-study.

Mildred Pepukai is a researcher within the ReBUILD consortium in Zimbabwe. She is currently a survey statistician at the Biomedical Research and Training Institute.

Stephen Buzuzi is a public health researcher leading ReBUILD's health financing (user fees) qualitative study in Zimbabwe. He is a Research Projects Coordinator at the Biomedical Research and Training Institute.

Shungu Munyati is a researcher and project director for the ReBUILD consortium in Zimbabwe with projects focusing on health financing and human resources for health. She is currently the Assistant Director-General for the Biomedical Research and Training Institute.

Sophie Witter is a Health Economist, leading on the health worker incentive research within the ReBUILD consortium. She is currently Professor of International Health Financing and Health Systems at Queen Margaret University in Edinburgh (Institute for Global Health and Development).

For correspondence regarding this report, please contact rebuildconsortium@lstmed.ac.uk

Acknowledgement

This work was carried out as part of the ReBUILD research programme (Research for building pro-poor health systems during the recovery from conflict). ReBUILD is funded by UK Aid from the UK government.

Suggested citation: Chirwa, Y., Mashange, W., Chandiwana, P., Buzuzi, S., Munyati, S. and Witter, S. 2015. *Understanding health worker incentives in three districts of Zimbabwe: survey report.* ReBUILD RPC Working Paper

Table of Contents

List of Tables

Table of Figures

Acknowledgements

This study would not have been possible without the contribution of the participants who were interviewed. We wish to thank the permanent secretary, Brigadier General Dr G Gwinji, in the then Ministry of Health and Child Welfare and now the Ministry of Health and Child Care, who authorised the study and introduced the study to the provincial medical directors, district medical officers, who in turn supported the study in their various jurisdictions. The managers and administrators at all health facilities sampled for the study helped recruit participants. The research assistants and support staff at Biomedical Research and Training Institute for behind the scenes activities to make the research possible. We also want to thank our Consortium Advisory Group (CAG) member, Mr C Samkange, who gave direction and assisted the team in setting up important interviews and advised on the health system in Zimbabwe. We would also want to thank the Liverpool School of Tropical Medicine, Queen Margaret University Edinburgh and the ReBUILD consortium, for the collaboration at various levels of the research process, including Haja Wurie who provided internal peer review comments. Finally we want to thank the Department for International Development, United Kingdom, who the supported the study through the ReBUILD Consortium. All views expressed here are those of the authors alone.

Acronyms

CAG	Country Advisory Group
EHP	Environmental Health Practitioner
HRH	Human Resources for Health
HRHIS	Human Resources for Health Information System
HSB	Health Service Board
IDIs	In-depth Interviews
KIIs	Key Informant Interviews
MoHCC	Ministry of Health and Child Care
MOHCW	Ministry of Health and Child Welfare
MRCZ	Medical Research council of Zimbabwe
NIHFA	National Integrated Health Facility Assessment
PCN	Primary Care Nurse
RCZ	Research Council of Zimbabwe
RDC	Rural District Council
RGN	Registered General Nurse
SCN	State Certified Nurse
STERP	Short Term Emergency Recovery Program
WHO	World Health Organization
IGA	Income Generating Activity
RAA`	Rural Area Allowance
PHC	Primary Health Care
HSB`	Health service Board
GoZ	Government of Zimbabwe
UNICEF`	United Nations Children Fund

UNFPA	United Nations Population Fund
HTF	Health Transition Fund
RBF	Results Based Financing
ZINA	Zimbabwe Nurses Association

Executive summary

Introduction

Incentive environments for key human resources for health (HRH) cadres in Zimbabwe in the wake of the severe economic, social and political crisis is an area of immense importance for rebuilding the health system. This study is part of the wider ReBUILD research programme on health systems in post conflict or post crisis countries. The overall goal of this sub-study is to understand the post-crisis dynamics for HRH in key health sectors - public, municipal, mission, private and rural district council - and ultimately how to reach and maintain incentives to support access to affordable, appropriate and equitable health services

Objectives and research methods

The main objective of the survey was to to understand the current incentive environment for key HRH cadres, their characteristics and the factors which motivate and demotivate them in Zimbabwe.This was a cross-sectional, retrospective study focusing on the differences between key categories of staff employed in different sectors of Zimbabwe's health system. A structured questionnaire was administered to 227 health workers across three districts of Zimbabwe. The proportion of respondents represented about 10% of the total staffing in these districts. The districts were chosen to be representative of urban and rural areas. District 1 was urban, district 2 was urban and rural, and district 3 was totally rural with some facilities situated in remote/hard to reach areas. At the time of the survey, poverty was wide spread in all the districts studied, although district 3 was worse off. The field work was conducted in February 2013

The questionnaire collected data on: respondents' background and household characteristics; their employment, workload and working hours; training patterns; pay from different sources; motivation; views on how their working life has changed in recent years; and plans for the future. Responses were entered using Epi Info version 3.5, coded, cleaned and analysed by profession, gender, sector and district, using STATA 12.

Ethical permission was obtained from, the Medical Research Council of Zimbabwe (MRCZ). Further review was done by the Research Council of Zimbabwe (RCZ) as is required with all research involving collaboration with international partners.

Study limitations included difficulty getting the full planned sample of health workers, especially for doctors and in the private sector. Some questions were harder to answer for participants – notably those on income, household expenditure, private practice and per diems. There were inconsistencies in the responses on per diems due to the fact that the per diems are not standard. A final limitation to highlight is that the findings are not nationally representative but present a picture of the situation in the study areas.

Findings

Characteristics of respondents

The nurses and midwives were mostly female and the environmental health professionals (EHPs) were mostly male. Only two doctors were interviewed in the study and both of them were male. The majority of cadres were married.Thirteen EHPs, (57) midwives, and (81) nurses were married. Higher proportions of EHPs (77%) and midwives (40%) were in the 45-54 age range contrasting markedly with the nurses 23%. For the nurses, the most common age range (37%) was 25-34. The median household size was around 5 across all cadres with no significant differences between male and female cadres.

There was a significant difference (*p-value*<0.001) in the number of cadres working in or out of their home province across districts, 93% in district 1, compared to 79% in district 3 and 75% in district 2 working in their home province.

Expenditure on food and non-food

The median expenditure on food per month across all the cadres was $200. Midwives had the highest maximum food expenditure of $2000, then nurses at $1200 and EHPs at $700. Salary differentials in sectors account for the gap between minimum and maximum food expenditure. There were significant differences across districts.

Savings or borrowings in the last month

Results reflect low levels of saving for all cadres. Only 6% of the male cadres and around 13% of the female cadres managed to save. There were no significant differences in savings between sectors and districts. Overall, 46% of the respondents had to borrow money in the month preceding the survey. Saving and borrowing patterns broadly follow income patterns, with staff in the municipalities least likely to borrow. There was no significant difference in the proportion of cadres who borrowed with respect to sector or by gender.

Current employment

65% EHPs and 45% of midwives were working in the municipal sector. 42% of nurses were working in the government sector. Overall, most of the cadres interviewed were working in the municipal sector (40%) while 38% were working in the government sector and 22% in the mission sector. There were no significant differences in the proportion of cadres across sectors. Health workers especially EHPs (65%) midwives (45%) and nurses (30%) had migrated from the public sector in pursuit of better terms and conditions, usually to the municipal providers. More nurses were found in the government sector as a result of a period of rural employment which is obligatory at initial deployment for all cadres.

Workloads

The median number of hours worked did not vary across the districts or across cadres (40 hours per week), although there were some high maximums for nurses and midwives in district 3. Doctors in district 2 worked for 64-94 hours per week. The mission and municipal sectors reported a higher maximum number of hours worked. Midwives in the mission sector reported significantly higher hours (96) worked per week than the other sectors.

Training

72% of the respondents had attended short courses training or seminars. Almost 42% had done post-basic training from the MoHCW, with a further 7% of nurses receiving donor-funded post-basic training. 19% had received in-service/in-house training. There were significant differences among cadres with a higher proportion of midwives reporting having received training, followed by EHPs and then nurses. By sector, municipal workers were most likely to have received training (91%), versus 86% in the government sector and 71% in the mission. There were no significant differences between males and females who received training or between districts..

Benefits of training

When asked what they saw as the benefits of training, almost 78% of cadres said greater knowledge, 63% cited skills and ability. 30% mentioned enhanced professional reputation/status and 20% said they felt more confident.

Benefits in kind

Over 50% of health care professionals mentioned receiving health care as a benefit in kind while around 40% received housing. The highest proportion of the cadres who mentioned receiving free accommodation were EHPs (53%), followed by nurses (45%) and midwives (28%).

Income from main health care work

In government, municipality and mission sectors respectively, the median salaries for EHPs were $250, $1100 and $232; for midwives they were $250, $1730 and $249; for nurses they were $250, $1000 and $250. All government and mission sector cadres reported that their salaries were regular while in the municipality 91% of EHPs, 74% of midwives and 92% of nurses reported receiving salaries regularly.

Allowances

Of the 74 cadres who reported changes in the rural area allowance (RAA) over the previous years, 4 said it was a new allowance, and 33 said it existed before and has increased. Almost half (49%) of the health workers in the mission sector and a third of the health workers (30%) in government reported an increase to their RAA. Of the 33 respondents that cited an increase in the RAA only 7 knew the actual amount by which it increased and this ranged from a minimum of $2 and a maximum of $60.

Other supplements

Allowances as percentage of median monthly salary in government, municipality and mission sectors was 131%, 29% and 85% for midwives, 106%, 28% and 94% for nurses and 72%, 33% and 57% for EHPs.

Retention allowance

All EHPs and doctors reported the retention allowance to be fixed, as did 67% and 66% of midwives and nurses respectively. Regularity of receipt of the retention allowance varied, from 33% of EHPs receiving it, to 100% for the two doctors. 62%, 19% and 49% of the cadres in the government,

municipality and mission sectors respectively reported changes in the retention allowance in the three years preceding the survey.

Total main income

Total income refers to all income from main work including allowances. There were significant differences between districts, with the total median income being $1,300 for district 1, $252 for district 2 and $241 district 3. This partly reflects the sectoral make-up in each district. The total median income for all cadres was $250 in government, $1,303 in the municipality and $246 in the mission sector. There were significant differences across sectors. There were no significant differences in the total income earned by male and female cadres.

Private practice

There were only 12 out of 210 health workers who reported getting private income; these were 1 doctor, 6 nurses and 5 midwives. The range of hours worked in private practice was 2 to 36 hours per week. The median private income earned by midwives was $200, while nurses earned $438.

Additional income

Respondents were asked about any income-generating activities (IGA) outside of the health sector that they were involved in. A third (33%) of the respondents mentioned that they were carrying out non-medical IGA. The median number of hours worked in other income generating activities was 13 hours per week for midwives and 8 hours per week for both EHPs and nurses. By sector, median hours spent on IGA was 8 hours in the government and mission sectors and 12 hours in the municipality sector. The difference was not significant by gender.

Total income from all sources (public, private, and additional)

The median total income from all sources for EHPs was $800. Midwives reported median total income of $350. The median total income for nurses was $250 while doctors reported $1,393.

The median total income for cadres in the government sector was $250, while cadres in the municipality received $1,303. In the mission sector cadres received a median total income of $246 from all sources. There are significant differences in the total income from all sources received by cadres across sectors. Total income in the municipal sector is fairly standardised with only two sources reported: the official net salary and allowances. The average total income comprises 75% net salary and about 25% allowances. The net salary for nurses in government was less than 20% of the average

total income, with about 45% coming from private practice. The pattern for midwives in the mission sector is similar to that of midwives in the municipality sector where the average total income sources are the official net salary plus allowances only. The municipality outlaws private practice while in the mission sector private practice is hindered by the absence of private surgeries in rural areas. The doctor who was interviewed in the mission sector had 80% of his total income coming from allowances, 18% from official net salary and 2% from private practice. His pattern of total income differs from the government doctor because of work experience and private practice.

Motivation and perceptions

When asked the question '*what are the main factors that motivate you to stay in your job?*', 31% of the respondents mentioned salary, 28% had no better options available elsewhere, 23% cited their passion for the job and 23% wanted to serve the community. The highest ranked motivating factor was passion, with an average score of 4.7, followed by salary/pay and security of work with a score of 4.5

Participants were asked what would motivate cadres to serve in rural areas. This was an open ended question where key phrases from the respondent were noted and were thematically analysed. Half (50%) of the cadres mentioned accommodation as an important factor which would motivate them to work in rural areas while about a third (31%) mentioned transport and good roads. 28% said electricity and 23% mentioned water, while 20% cited rural allowance as an important factor which would motivate them. More females expressed that the motivating factor for them to work in rural areas was the passion to work in those areas. There were significant differences between cadres who mentioned accommodation, better salary, better schools for children and passion to work in rural areas.

Significantly more cadres in urban areas expressed that better salaries, electricity, good roads and a vehicle would motivate them to work in rural areas, while more cadres in rural areas expressed that the cheap standard of living motivates them to work in rural areas

How life has changed since the crisis

Participants were asked how their life had changed post crisis. 34% of the respondents mentioned that their workload had increased since the end of the crisis in 2009, while almost 31% said resources

were now available at work. 30% of the respondents mentioned that they were now able to pay school fees. About 21% mentioned better salary

Cadres in the government sector received a total median hourly rate of pay of $1.57 while those in the municipality sector received $8.13. In the mission sector cadres received $1.40 per hour based on all income received. There were significant differences in the hourly rates received by cadres across sectors**.** The hourly rate was calculated with the assumption that cadres work four weeks in a month. However, we compared cadres of different grades and years of experience.

Conclusions

The survey provides insights into the current incentive environment for key HRH cadres, HRH characteristics, incomes and the factors which motivate and demotivate them in three districts of Zimbabwe.

The findings confirm that the health sector is male dominated in the medical and environmental health professions and female dominated in the nurse and midwifery professions. The nursing profession had the youngest cadres concentrated in the government and mission sector, mainly working in rural areas. Salary and pay are critical determinants of motivation for all four cadres. We also found that age affects perceptions on motivation, with older nurses and midwives identifying passion and salary as both important factors while younger cadres were motivated by salary and security of the job. For all cadres, staying in the job because there are no better options was common, which suggests high levels of demotivation. This was the case across all the age groups and predominantly in the government and mission sector.

The municipality employed a more experienced health workforce whom they are able to retain through attractive pay and allowances. The health workforce in the government, mission and rural district council sectors are demotivated by poor salaries and lack of opportunities to do private practice. The survey confirmed that migration of health workers from the public sector in pursuit of better terms and conditions internally usually to the municipal providers. There is maldistribution of health workers fuelled by the disparities in incentives which if not addressed will make the inequities in health provision between rural and urban areas even greater.

Introduction

ReBUILD is a research programme concerned with health system development in post-conflict or post crisis countries, which aims to develop lessons for governments on how to make or recreate and sustain fair health systems. Understanding health worker incentives in post-conflict or post-crisis states is a component of the wider ReBUILD study, undertaken specifically to explore the current incentive environments for key human resources for health (HRH) cadres in Zimbabwe.

Midwives, general nurses, doctors and environmental health professionals were the cadres that had the highest vacancy rate yet they are vital for the primary health care (PHC) model that is the centre piece of health delivery in Zimbabwe. Zimbabwe experienced a severe economic, social and political crisis that lasted close to a decade (1997-2008). The crisis exacted a debilitating effect on the entire health system and the ramifications continue to weigh down health service delivery.

The health sector experienced sharp decreases in funding, deterioration of health infrastructure, loss of experienced health professionals, drug shortages, increased burden of disease and the attendant high demand for services, which all inevitably led to a drastic decline in the quality of health services available for the population (GoZ, 2009, MoHCW, 2009, MoHCW & HSB, 2010; MoHCW, 2012; Campbell et al, 2013; Crisp & Chen, 2014).

The availability of HRH in the right numbers, at the right time and place, with the appropriate skills mix and willing to stay in their jobs, is a critical aspect of health service delivery. The crisis affected HRH and led to serious attrition across the entire health sector. Considerable emigration of health workers from Zimbabwe to other countries in the region and beyond occurred during the crisis. Within country, government-run institutions lost a lot of health professionals to private-for-profit as well as private-not-for-profit institutions. The reasons why HRH were deserting the public health sector more than other sectors, were low morale aggravated by low salaries, limited support and supervision, unsatisfactory working conditions and poor budget support (GoZ, 2010; Chirwa et al 2014; Chirwa et al 2016[a]; Chirwa et al 2016[b]). There has been no profound improvement in HRH attraction and retention despite significant strides having been made in resolving some of the causal factors of the high attrition of HRH in the immediate post-crisis period.

The overall goal of this sub-study is to understand the post-crisis dynamics for HRH in key health sectors - public, municipal, mission, private and rural district council (RDC) - and ultimately how to reach and maintain incentives to support access to affordable, appropriate and equitable health services.The health worker survey, collected data in face to face interviews with selected HRH on a variety of aspects related to incentives and motivation.

Research methods

This report presents and analyses data from the survey component of the health worker study. The study was cross sectional and retrospective in design, focusing on the difference between key categories of health staff employed in different sectors of Zimbabwe's health system. The survey was complementary to other methods that included key informant interviews (KIIs) and in-depth interviews (IDIs) with health workers.

Objectives

The objective of the survey is to understand the current incentive environment facing key HRH cadres, their characteristics and the factors which motivate and demotivate them.

Approach used

A structured questionnaire was used to collect data from all cadres of health workers through face-to-face interviews.

Questionnaire development

The questionnaire was developed in collaboration with other members of the ReBUILD consortium carrying out similar studies in their respective countries with input from the members of the consortium in the United Kingdom. In Zimbabwe, the questionnaire was adapted to the local context and then field tested. The questionnaire and the qualitative tools were reviewed by the national ethics body. The questionnaire was pretested in a non-participating province and district and then further reviewed to come up with the final draft.

Study sites

The study was conducted in two administrative provinces. The two provinces were selected because they host diverse health care employers from which comparative analyses of attraction, retention, and performance of HRH across the spectrum of health care employers could be made. Three districts were then purposively selected from the two provinces. The selection criterion was the availability of diverse healthcare providers that essentially included municipality and or council, private-for-profit and not-for-profit, church or mission providers and the public sector. One wholly urban district (district 1) with a diverse spectrum of health institutions representative of the various tiers of the health system was selected; a second district with both urban and rural sectors was selected (district 2) and a third district (district 3) which was wholly rural was also selected to make up the three study areas. The selection of the study sites was informed by the broad objective of comparing inter-provincial, intra-provincial and inter-sectoral variations in incentive environments and their effect on HRH pay, workload and motivation.

Sample size and sampling methodology

To draw up the samples for each study site, we used provincial level staffing data from the Health Service Board (HSB). The provincial level data was then divided by the number of districts in the province. The totals derived from this process were then further distributed by type of employer. For government, municipal and local councils an equal number of participants per cadre were to be interviewed because they are considered as public, but for the mission hospitals/clinics and private sector we used the official percentage of their contribution (23% for mission sector and 12% private sector) to the wider health system to come up with numbers to be interviewed[1] (WHO Zimbabwe HRH profile 2009). A survey by Gupta and Dal Poz (2009) and the National Integrated Health Facility Assessment (NIHFA) contend that there is public health sector bias in the sampling of participants in health systems research and this has been the characteristic of many research studies which have seen the private sector being excluded. Some of the reasons for this include the difficulty of gaining

[1] The official percentage contribution to health service delivery of the mission sector as measured by bed capacity, catchment area populations and utilisation returns at primary clinics that do not admit patients is 23% and for the private sector it is 12% , 65% is provided by government, municipality and rural district councils (WHO Zimbabwe HRH profile 2010)

access, the profit ethic which puts such research at the bottom of the priorities of these private providers and a weak Human Resources for Health Information System (HRHIS) which does not track what is happening in the private sector (MoHCW, 2012).

The samples were calculated using Excel taking into account all of these attributes. We aimed to sample larger proportions of smaller categories (e.g. 50% of doctors in the district) but smaller proportions for groups with more members (e.g. 10% of nurses and midwives). These calculations meant we were supposed to interview 314 respondents during the survey, distributed thus: 154 in district one, 80 in district two and 80 in district three. There were changes to the sample in the field because of the provincial routine staffing data mismatch between staffing returns and actual staff in post at the facilities[2]. Successive reports have referred to the challenge faced by the Ministry of Health and Child Welfare (MoHCW) in compiling and maintaining accurate routine staffing data (see Initiatives Inc.,1998; WHO MoHCW, 2002, MoHCW, UNFPA, UNICEF & WHO 2005; MoHCW, 2007; MoHCW, 2008; MoHCW, 2008a & 2008b; Wheeler, 2010; Dieleman et al., 2012; MoHCW, 2012).

A total of 227 representing 18% of the health workers in the three districts, out of the targeted sample of 314 (24%) participated in the survey, with the highest numbers being midwives (113) followed by nurses (95) and Environmental Health Practitioners (17)[3] as shown in Table 1. Based HSB staff returns, the three districts had a total of 1,261 nurses, midwives, doctors and environmental health professionals. However the actual staffing differed significantly with the sampling frame we used in the design stage of the survey.

Table 1: Planned and actual sample of health workers for survey by districts

Districts	**District 1**		**District 2**		**District 3**		**Total**	
Cadre	**Target Sample**	**Actual Sample**	**Target Sample**	**Actual Sample**	**Target Sample**	**Actual Sample**	**Target Sample**	**Actual Sample**

[2] See the Excel spread sheet in annexes showing the sampling theory.
[3] Environmental health practitioners have all completed a three-year diploma. They provide preventive services for communicable and non-communicable diseases in the communities. Their work includes inspection of food dispensing facilities to ensure that they are compliant with public health requirements, they educate and are involved in public health preventive activities like disinfecting homes to reduce mosquito populations, ensuring proper disposal of refuse, pesticide containers, proper methods of burial of the dead, inspecting abattoirs and butcheries. They ensure that the food hygiene act is complied with pursuant to the public health act from village level up to the national level.

EHP	18	6	4	5	4	6	26	17
Midwives	50	62	34	29	34	22	118	113
Nurse	50	29	34	29	34	37	118	95
Doctors	18	0	4	2	4	0	26	2
Clinical Officers	18	0	4	0	4	0	26	0
Total	**154**	**97**	**80**	**65**	**80**	**65**	**314**	**227**

Training of data collectors and quality assurance

All field workers, supervisors and research assistants were trained in interviewing, quality control issues, such as checking the completeness of responses on the questionnaires. Training involved the internalisation of the objectives of the study and the survey. Role-plays on questionnaire administration were carried out, followed by a discussion about the role-plays. Before embarking on data collection, half day reorientation sessions were held to remind researchers about the key issues of the survey and the questionnaires. Debriefing sessions were conducted after each field session to review challenges.

Fieldwork

Fieldwork started in the first district on 5th February 2013 with reorientation of the research assistants about the questionnaire and the research objectives.. The questionnaire was then administered with health workers from municipality providers, then with the mission, public sector and for-profit private providers. There was a lull in data collection after district one had been done and when we resumed data collection the research team again was reoriented on the questionnaire for one day. All questionnaires were administered at the health facilities or work place of each health worker. The interviews were conducted in secure offices where the interviewer and the participant had no interference from other health workers. No financial costs were incurred by the participants except for the time they had to set aside for the interview. Data collection took 14 days in district 1, 7 days in district 2 and 8 days in district 3.

Data collection

Questionnaires were administered face to face in the three districts with health workers from the mission, municipality, RDC and public sector. We could not administer the questionnaire in private sector institutions due to challenges discussed in the limitations section of this report.

Data analysis

The quantitative data was captured electronically using Epi Info version 3.5, coded, cleaned and analysed using STATA 12. The significance level for statistical analyses was set at 5%. Analysis was done by cadre/profession, district, gender and sector. Median, minimum, and maximum are presented for numerical variables. The sample was not normally distributed as a result, so medians are used to describe relationships. Categorical data were analysed for statistical significance using the Chi-squared test and for significance between medians, for continuous data, the Kruskal Wallis test was used.

For questions where respondents were asked to rank factors, a Likert scale of 5-1 was applied where 5 was allocated to the highest rank and 1 being the lowest value. All rankings were analysed in this way; thus the highest value indicated the most mentioned and favoured factors.

Research ethics

Ethical permission was obtained from, the Medical Research Council of Zimbabwe (MRCZ). Further review was done by the Research Council of Zimbabwe (RCZ) as is required with all research involving collaboration with international partners. The study was also ethically approved by the Liverpool School of Tropical Medicine. Before participants could be interviewed, the interviewer informed the participant about the research study's objectives, why they had been chosen as a participant and the risks and benefits of participating in the study. The participants were given the opportunity to ask questions or make comments and then make a decision to participate or not to participate in the study. An information leaflet with information about the study had been provided prior to the research to all participants through the head of the institutions they were affiliated to. A consent form which participants were asked to read before the interview also provided further information. The participant then made a decision to participate voluntarily and was asked to sign two consent forms. The participants were assured that the whole process would uphold the highest standards of

confidentiality and that their participation would be anonymised. One copy of the signed consent form was given to the participant for their record and the researcher retained another copy which will be kept securely with all other research records.

Research limitations

1. Carrying out the survey was very challenging particularly in a situation where participants were still smarting from the effects of the crisis. The raising of hope that things were now going to get better was very palpable among participants and yet this was beyond the scope of the research.
2. The other challenge was that we could not get the number of participants as had been planned because routine staffing records do not correspond to actual staffing in the facilities. The real staffing situation is variable. The effects of the crisis were still very evident and a lot of HRH planning was still being mediated in an ad hoc manner. HRH were being moved around, particularly in district two and three, to ensure some crude equitable distribution. This was mainly because there was an effective freeze on hiring. Vacancies created either through resignation, death and retirement had to be resolved by juggling available HRH to ensure that the facilities had at least some HRH to keep the facility doors open.
3. The private sector was difficult to access and hence we could not carry out the survey. The other problem in the private sector was that some doctors are employed by the public sector but do locum work in the private sector.
4. The fundamental challenge with doctors across the four sectors was that they did not want to participate in the survey because it was not worth their while. This hinders a comparison of the incentive environments in this sector with those of the other sectors. Analysis for doctors is presented but is not reliable because of the small sample size. In the public sector some doctors and midwives refused to participate arguing that it was a waste of money and their time.
5. HRH staffing data was not available in a format that distinguished staffing in rural, municipal and private sectors and hence we had to rely on staff returns from the HSB from one year which grouped together public, municipal and rural district council HRH. The HRH from the private-for-profit were not included in the global staff returns used for deducing the sample size.

6. Another limitation to highlight is that some questions were harder to answer for participants – notably those on income, household expenditure private practice and per diems. There were inconsistencies in the responses on per diems due to the fact that the per diems are not standard. However, non-response rates were low – below 1% for all questions.
7. A final limitation to highlight is that the findings are not nationally representative but present a picture of the situation in the study areas.

Findings

1. Characteristics of respondents

Table 2 below shows the number of cadres by district. All the EHPs (6) who were interviewed in district 1 were male. 3 out of 5 EHPs in district 2 were female, and in district 3 there were 3 male and 3 female. The majority (48) of midwives in district 1 were female and all the midwives who were interviewed in district 2 were also female. In district 3 most of the midwives (10) were female. The majority of nurses in all the districts were female. Only two doctors were interviewed in the study and both were male.

Table 2: Number of cadres by district and gender

Districts	**District 1**		**District 2**		**District 3**		**Total**	
Cadre	**Male**	**Female**	**Male**	**Female**	**Male**	**Female**	**Male**	**Female**
EHPs	6	0	2	3	3	3	11	6
Midwives	4	48	0	22	1	10	5	80
Nurses	6	33	9	26	15	32	30	91
Doctors	0	0	2	0	0	0	2	0
Total	**16**	**81**	**14**	**51**	**20**	**45**	**50**	**177**

The majority of EHPs (13) were married with children. Most midwives (57) were married with children, 15 were widowed and 11 were single with children. Most of the nurses (81) were married with children, 11 were single with children, 10 were widowed and 9 were single. The only two doctors who were interviewed were married with children as shown in

Table 3.

Table 3: Number of cadres by professional title and marital status

Cadre	Single	Single with children	Married with children	Married without children	Divorced	Widowed	Separated	Total
EHPs	0	0	13	1	2	1	0	**17**
Midwives	2	11	57	0	1	15	0	**86**
Nurses	9	11	81	4	5	10	1	**121**
Doctors	0	0	2	0	0	0	0	**2**
Total	**11**	**22**	**154**	**5**	**8**	**26**	**1**	**227**

Table 4 shows number of cadres by district ,sector and their work stations. Overall, the EHPs are more concentrated in the municipalities, as are midwives. Nurses are more present in government employment. There are few doctors in rural areas. All EHPs in district 1 worked for the municipality and 3 out of 5 EHPs also worked for the municipality in district 2. In district 3, EHPs were evenly distributed across the three sectors. However, the EHPs in mission facilities are still employed by the government although they work in mission health facilities.

Table 4: Number of cadres by district and sector

Districts	**District 1**			**District 2**			**District 3**			
Cadre	Govt	Munic	Mission	Govt	Munic	Mission	Govt	RDC	Mission	**Total**
EHPs	0	6	0	1	3	1	2	2	2	**17**
Midwives	21	41	0	12	8	9	6	9	7	**113**
Nurses	18	11	0	11	4	14	16	4	17	**95**
Doctors	0	0	0	1	0	1	0	0	0	**2**
Total	**39**	**58**	**0**	**25**	**15**	**25**	**24**	**15**	**26**	**227**

Most EHPs (77%) were in the 45-54 age group as shown in **Error! Reference source not found.**. Significantly more midwives (40%), were between the ages of 45-54 years compared to nurses (23%). A significantly higher proportion of nurses were between the ages of 25-34 years (37%) compared to EHPs (6%) and midwives (16%) respectively.

Table 5: Age of respondents by professional title, grouped into decades

Cadre	**25-34** **n (%)**	**35-44** **n (%)**	**45-54** **n (%)**	**55-64** **n (%)**	**Total** **n (%)**
EHPs	1(5.9)	3(17.6)	13(76.5)	0(0)	**17(100.0)**
Midwives	14(16.3)	20(23.3)	38(39.5)	18(20.9)	**86(100.0)**
Nurses	45(37.2)	34(28.1)	29(23.1)	14(11.6)	**122(100.0)**
Doctors	1(50)	1(50)	0(0)	0(0)	**2(100.0)**
Total	**61(26.9)**	**58(25.6)**	**76(33.5)**	**32(14.1)**	**227(100.0)**
p- value	***<0.001***				

The median number of years worked in the health sector by EHPs was 25, 20 and 27 years in the government, municipality and mission sectors respectively. The median number of years worked in the health sector by midwives in the government sector was 20 years while midwives in the municipality and mission sectors had worked for 22 years in the health sector. The median number of years worked in the health sector by nurses in the government, municipality and mission sectors was

9, 14.5 and 7 years respectively. There was a significant difference *(p- value = 0.007)* across all sectors (Table 6).

Table 6: Number of years worked in health sector by professional title and sector

Sector	**Government**			**Municipality**			**Mission**			
Cadre	**Median**	**Min**	**Max**	**Median**	**Min**	**Max**	**Median**	**Min**	**Max**	***p-value***
EHPs	25	22	30	20	10	27	27	5	30	*0.266*
Midwives	20	5	36	22	8	45	22	6	33	*0.069*
Nurses	9	2	32	14.5	4	42	7	5	41	*0.078*
Doctors	12	12	12	-	-	-	4	4	4	-
Total	**13**	**2**	**36**	**20**	**4**	**45**	**15**	**4**	**41**	***0.007***

Slightly more than half (53%) of EHPs were working in their home province. 64% of midwives were working out of their home province while 54% of nurses were working in their home province. There was a significant difference *(p-value = 0.047)* in the proportions of cadres who were working in their home province and those who were working out of their home province as shown in Table 7. These patterns partly reflect the level of facility and sector in which the different cadres are working (e.g. midwives often work in higher level facilities in municipalities), as well as recruitment patterns (e.g. EHPs are recruited locally and are required to return to work in their home areas post training).

Table 7: Cadres working in/out of home province

Cadre	**Working in Home Province n (%)**	**Working out of Home Province n (%)**
EHPs	9(52.9)	8(47.1)
Midwives	31(36.1)	55(63.9)
Nurses (RGN/SCN/PCN)	66(54.1)	56(45.9)

Doctors	1(50.0)	1(50.0)
Total	**107(47.1)**	**120(52.9)**
p-value	***0.047***	

There was a significant difference (*p-value < 0.001)* in the number of cadres working in or out of their home province across districts as shown Table 8. Most cadres (93%) in district 1 were working out of their home province. About 79% of cadres in district 3 and 75% in district 2 were working in their home province. This largely reflects the fact that district 1 is urban and offers better conditions and more jobs than the largely rural districts 2 and 3.

Table 8: Working in or out of home province by district

District	**Working in Home Province n (%)**	**Working out of Home Province n (%)**
District 1	7(7.2)	90(92.8)
District 2	49(75.4)	16(24.6)
District 3	51(78.5)	14(21.5)
Total	**107(47.1)**	**120(52.9)**
p-value	***<0.001***	

A higher proportion of cadres working in their home provinces were in the mission sector compared to the other two sectors. The difference was significant (*p-value < 0.001)* as shown in Table 9. This reflects the cadres employed by the mission sector, their focus in rural areas as well as the local recruitment and training which the mission sector carries out.

Table 9: Cadre working in or out of home province by sector

Sector	**Working in Home Province n (%)**	**Working out of Home Province n (%)**
Government	34(39.5)	52(60.5)

Municipality	30(33.3)	60(66.7)
Mission	43(84.3)	8(15.7)
Total	**107(47.1)**	**120(52.9)**
p-value	***<0.001***	

Across the three districts more males (60%) compared to females (44%) were working in their home province. The difference was significant *(p-value = 0.039)* as shown in Table 10.

Table 10: Cadres working in/out of home province by gender

	Male **n (%)**	**Female** **n (%)**	**Total** **n (%)**
Working in Home	30(60.0)	77(43.5)	**107(47.1)**
Working out of Province	20(40.0)	100(56.5)	**120(52.9)**
TOTAL	**50(100)**	**177(100)**	**227(100)**
p-value	***0.039***		

The median household size was 5 across all cadres (as shown in

Table 11) and there were no significant differences between male and female cadres.

Table 11: Household size by cadre and gender

Gender	**Male**			**Female**			**Total**			
Cadre	**Median**	**Min**	**Max**	**Median**	**Min**	**Max**	**Median**	**Min**	**Max**	***p-value***
EHPs	5	2	7	4.5	2	7	4.5	2	7	*0.724*
Midwives	4.5	1	6	5	2	10	5	2	10	*0.969*
Nurses	5	1	11	5	1	10	5	1	10	*0.378*
Doctors	5	4	6	-	-	-	5	4	6	-
Total	**50**			**177**			**227**			***0.205***

Health workers usually had 3-5 dependents across all professional types (Table 12).

Table 12: Number of dependents by cadre

	Number of dependents n (%)					
Cadre	**0-2**	**3-5**	**6-8**	**9-11**	**>11**	**Total**
EHPs	2(15.4)	7(7.2)	4(5.3)	4(13.8)	0(0.0)	**17 (7.5)**
Midwives	3(23.1)	40(41.2)	30(39.5)	9(31.0)	4(33.3)	**86(37.9)**
Nurses	8(61.5)	49(50.5)	41(53.9)	16(55.2)	8(66.7)	**122(53.7)**
Doctors	0(0.0)	1(1.0)	1(1.3)	0(0.0)	0(0.0)	**2(0.8)**
Total (N)	**13**	**97**	**76**	**29**	**12**	**227**

Expenditure on food and non-food

The median expenditure on food across all the cadres was $200 as shown in Table 13. EHPs spent a minimum of $50 and a maximum of $700 whilst midwives spent a minimum of $40 and a maximum of $2000. Nurses spent a minimum of $50 and a maximum of $1200 on food per month. One midwife and two nurses did not know their expenditure on food.

Table 13: Household expenditure on food by profession (USD)

Cadres	**Median**	**Minimum Expenditure**	**Maximum expenditure**	**Total**
EHPs	200	50	700	**2**
Midwives	200	40	2,000	**85**
Nurses	200	50	1,200	**120**
Doctors	600	300	900	**17**
Total	**200**	**40**	**2,000**	**224**

The median expenditure on food reflects the higher income levels in urban areas (discussed below), being consistently higher across all groups in district 1 (Table 14).

Table 14: Household expenditure on food by profession and district (USD)

Districts	**District 1**			**District 2**			**District 3**			
Cadre	**Median**	**Min**	**Max**	**Median**	**Min**	**Max**	**Median**	**Min**	**Max**	***p- value***
EHPs	300	200	700	200	50	250	200	50	300	*0.048*
Midwives	300	40	2,000	200	100	600	150	70	600	*0.044*
Nurses	300	50	1,200	200	70	500	150	60	700	*0.001*
Doctors	-	-	-	600	300	900	-	-	-	-
Total	**300**	**40**	**2,000**	**200**	**50**	**900**	**150**	**50**	**700**	**<0.001**

Table 15 indicates that the median expenditure on food by males was higher than for females for EHPs and midwives, but not for nurses: however the medians were significantly different for EHPs *only (p-value = 0.046).*

Table 15: Household expenditure on food by profession and gender (USD)

Gender	**Male**			**Female**			
Cadre	**Median**	**Min**	**Max**	**Median**	**Min**	**Max**	***p-value***
EHPs	300	60	700	200	50	250	*0.046*
Midwives	300	75	650	200	40	2000	*0.646*
Nurses	150	70	500	200	50	1200	*0.230*
Doctors	600	300	900	-	-	-	-
Total	**200**	**60**	**900**	**200**	**40**	**2000**	***0.675***

Table 16 shows median expenditure on non-food by EHPs and midwives was $600 per month and most nurses reported spending $350 every month on non-food.

Table 16: Household expenditure on non-food by profession (USD)

Cadres	**Median**	**Minimum Expenditure**	**Maximum expenditure**	**Total**
EHPs	600	150	2,000	17

Midwives	600	100	3,000	85
Nurses	350	50	2,100	121
Doctors	1,250	1,000	1,500	2
Total	**460**	**50**	**3,000**	**225**

The median expenditure on non-food items again reflects the urban/rural pattern of the districts (Figure 1) with significant differences across districts.

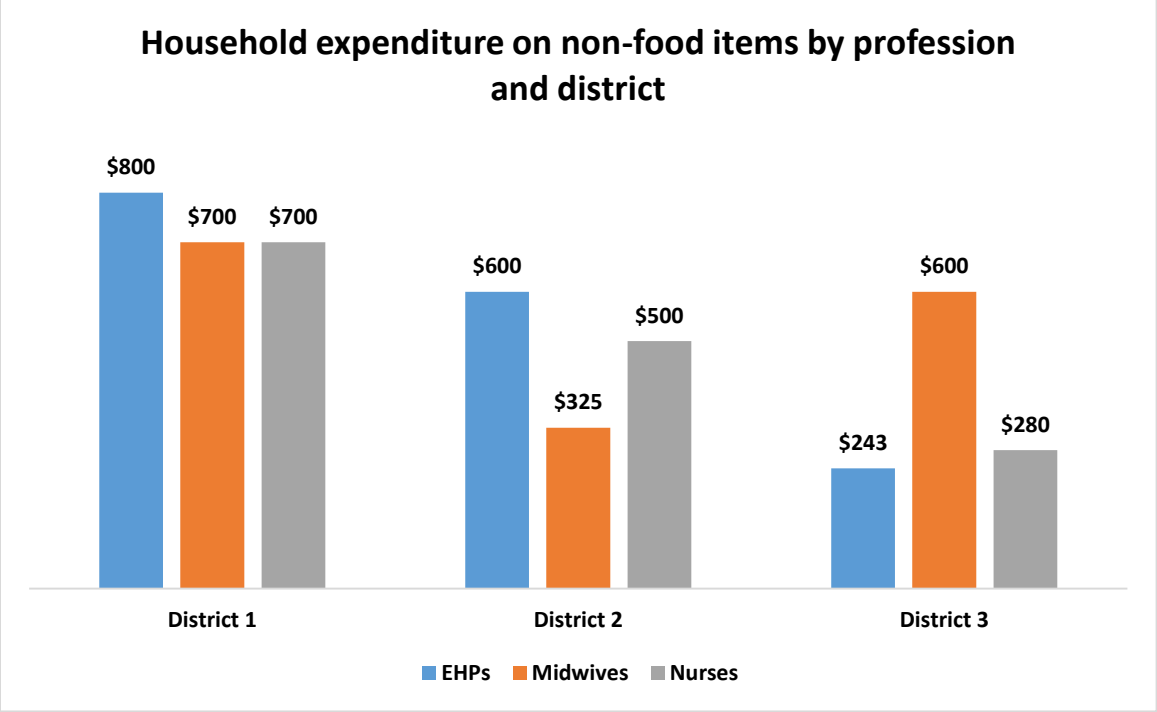

Figure 1: Household expenditure on non-food items by profession and district (USD)

The median expenditure on non-food items by males and females was $350 and $500 respectively with no significant differences *(*Table 17).

Table 17: Household expenditure on non-food by profession and gender (USD)

Gender	**Male**			**Female**			
Cadre	**Median**	**Min**	**Max**	**Median**	**Min**	**Max**	***p-value***
EHPs	600	150	2,000	348	200	1,500	*0.544*

Midwives	600	280	3,000	600	100	2,800	*0.751*
Nurses	300	100	1,000	400	50	2,100	*0.079*
Doctors	1,250	1,000	1,500	-	-	-	
Total	**350**	**100**	**3,000**	**500**	**50**	**2,800**	***0.147***

The median expenditure on food as a percentage of the total monthly expenditure largely reflects income patterns, being highest for nurses, followed by midwives and the EHPs with no significant differences between male and female cadres (Table 18).

Table 18: Expenditure on food as a percentage of the total monthly household expenditure by cadre and gender (USD)

Gender	**Male**			**Female**			
Cadre	**Median**	**Min**	**Max**	**Median**	**Min**	**Max**	***p-value***
EHPs	17.6	13.3	70.0	18.8	11.8	50.0	*0.763*
Midwives	28.4	9.1	60.0	25.0	3.7	80.0	*0.817*
Nurses	33.3	10.0	75.0	29.7	5.3	93.3	*0.485*
Doctors	30.3	23.1	37.5	-	-	-	-
Total	**29.5**	**9.1**	**75.0**	**27.3**	**3.7**	**93.3**	***0.382***

The median expenditure on food as a percentage of the total monthly household expenditure by sector is shown in Table 19. Overall, the median ranges from 14% for mission EHPs to 33% for mission nurses. Midwives expenditure on food as a percentage of the total monthly household expenditure was significantly lower in the mission sector

Table 19: Expenditure on food as a percentage of the total monthly household expenditure by sector

Sector	**Government**			**Municipality**			**Mission**			
Cadre	**Median**	**Min**	**Max**	**Median**	**Min**	**Max**	**Median**	**Min**	**Max**	***p-value***
EHPs	20.0	11.8	66.7	17.6	13.6	70.0	14.3	13.3	54.5	*0.741*

Midwives	27.3	6.7	75.0	21.8	3.7	80.0	31.7	5.0	57.1	*0.047*
Nurses	30.0	10.0	93.3	30.0	5.3	57.1	33.3	9.3	75.0	*0.318*
Doctors	37.5	37.5	37.5	-	-	-	23.1	23.1	23.1	-
Total	**27.9**	**6.7**	**93.3**	**24.4**	**3.7**	**80.0**	**32.6**	**5.0**	**75.0**	***0.009***

Savings or borrowings in the last month

Very few staff had saved in the last month, and there was no significant difference by gender. Only six percent of the male cadres managed to save while about 13% of the female cadres managed to save (Table 20).

Table 20: Savings by gender

Gender	**Male** **n (%)**	**Female** **n (%)**	**Total** **n (%)**
Saved	3(6.0)	23(13.0)	26(11.5)
Not saved	47(94.0)	153(86.4)	200(88.1)
Refused to answer	0(0.0)	1(0.6)	1(0.4)
Total	50	177	227
p-value	***0.333***		

There were no significant differences between cadres who reported to have saved. However percentages of those who had saved were still low among cadres (EHPs 6%, midwives 15% and nurses 9%). The same pattern can be observed across sectors with government cadres reporting the lowest proportions of cadres who had saved. There were no significant differences between sectors and districts.

Table 21 shows the sums saved. Although saving is not common, some individuals managed to save relatively substantial sums. These may reflect the wider income generating activities of staff, as well as in-kind benefits received.

Table 21: How much they saved by cadre (USD)

	Amount saved					
Cadre	**0 – 50**	**51-100**	**101-500**	**501-1000**	**>1000**	**Total**
EHPs	0	0	1	0	0	1
Midwives	1	1	9	2	0	13
Nurses	2	4	2	1	2	11
Doctor	0	0	0	1	0	1
Total	**3**	**5**	**12**	**4**	**2**	**26**

Overall, 46% of the respondents had borrowed in the previous month. Borrowing patterns broadly follow income patterns, with staff in the municipalities least likely to borrow (
Table 22).

Table 22: Whether they borrowed by cadre and sector

Sector	**Government (n)**			**Municipality (n)**			**Mission (n)**		
Cadre	**Yes**	**No**	**Total**	**Yes**	**No**	**Total**	**Yes**	**No**	**Total**
EHPs	2	1	3	4	7	11	2	1	3
Midwives	20	11	31	9	30	39	8	8	16
Nurses	23	28	51	22	18	40	13	18	31
Doctor	0	1	1	0	0	0	1	0	1
Total	**45**	**41**	**86**	**35**	**55**	**90**	**24**	**27**	**51**

Of the 86 cadres who worked in the government sector, just over half (52%) had borrowed as shown in Table 23. 39% of the cadres in the municipality had borrowed and 47% of the cadres in the mission

sector had borrowed. There was no significant difference (*p- value = 0.198)* in the proportion of cadres who borrowed by sector.

Table 23: Whether they borrowed by sector

Sector	**Yes** **n (%)**	**No** **n (%)**	**Total** **n (%)**
Government	45(52.3)	41(47.7)	86(100)
Municipality	35(38.9)	55(61.1)	90(100)
Mission	24(47.1)	27(52.9)	51(100)
Total	**104(45.8)**	**123(54.2)**	**227(100)**
p- value	***0.198***		

Table 24 shows that half of the males who participated in the study and 45% of the females had borrowed money. There was no significant difference between the males and females who had borrowed.

Table 24: Whether they borrowed by gender

Gender	**Yes** **n (%)**	**No** **n (%)**	**Total** **n (%)**
Male	25(50.0)	25(50.0)	50(100.0)
Female	79(44.6)	98(55.4)	177(100.0)
Total	**104(45.8)**	**123(54.2)**	**227(100.0)**
p- value	***0.501***		

The median amount borrowed by EHPs, midwives and nurses was $175, $300 and $200 respectively as depicted in Table 25. As with savings, some maximums are high - $2,500 for nurses and $1,800 for midwives.

Table 25: How much they borrowed by cadre (USD)

	Amount borrowed			
Cadre	**Median**	**Min**	**Max**	**Total**
EHPs	175	50	400	8
Midwives	300	50	1,800	37
Nurses	200	10	2,500	58
Total	**249**	**10**	**1,800**	**103**

Across the sectors, the most common amount borrowed was $101-500. (Table 26)

Table 26: Amount borrowed by sector (USD)

	Amount borrowed					
Sector	**0 – 50**	**51-100**	**101-500**	**501-1,000**	**>1,000**	**Total**
Government	3	6	29	3	4	45
Municipality	5	2	21	5	2	35
Mission	2	3	16	1	2	24
Total	**10**	**11**	**66**	**9**	**8**	**104**

Ownership of household assets

The availability of electricity, own toilet , access to running water and ownership of mobile phones were uneven across the three districts, with higher proportions owning assets in district 1, followed by 2 and 3 (Figure 2).

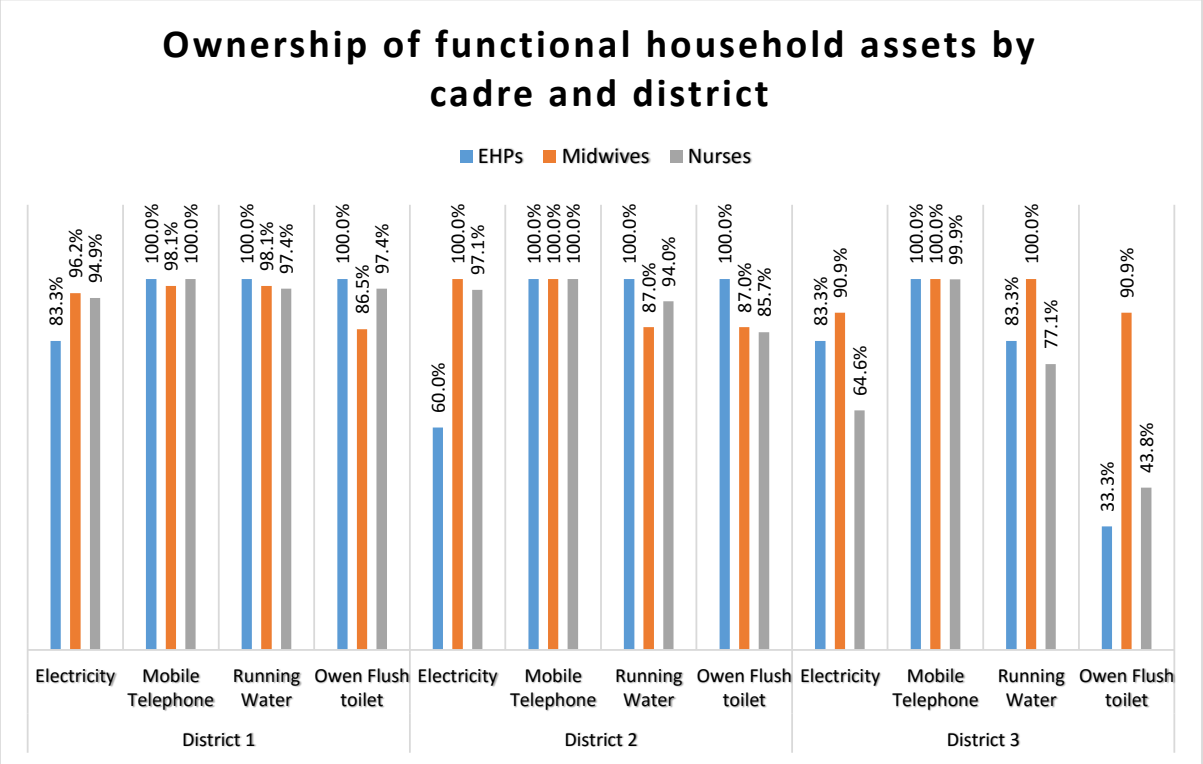

Figure 2: Ownership of functional household assets by cadre and district

Generally more female cadres had functional household assets compared to males as shown in Table 27

Table 27: Ownership of functional household assets by cadre and gender

Gender	Male n (%)				Female n (%)			
Cadre	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**
EHPs	9 (81.8)	11 (100.0)	10 (90.9)	10 (90.9)	4 (66.7)	6 (100.0)	6 (100.0)	3 (50.0)
Midwives	6 (100.0)	6 (100.0)	6 (100.0)	4 (66.7)	77 (96.3)	79 (98.8)	76 (95.0)	71 (88.8)
Nurses	22 (71.0)	30 (96.8)	24 (77.4)	19 (61.3)	80 (87.9)	91 (100.0)	84 (92.3)	70 (76.9)
Doctor	2 (100.0)	2 (100.0)	2 (100.0)	2 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Total	**39 (78.0)**	**49 (98.0)**	**42 (84.0)**	**35 (70.0)**	**161 (91.0)**	**176 (99.4)**	**166 (93.8)**	**144 (81.4)**

2. Current employment and workload

Place of work

Out of the 17 EHPs who participated in the study, 7 worked for Bulawayo and Masvingo municipality while 3 worked at the mission hospital as shown in

Table 28. Of the 86 midwives who were interviewed, 37 worked at municipal clinics, 20 at the central hospital while 16 worked at a mission hospital. Of the 122 nurses who participated in the study 30 worked at a mission hospital, 26 at municipal clinics while 19 worked at central hospital. One doctor worked at a provincial hospital while the other one worked at a mission hospital. Nine cadres were working in administrative offices for the municipality and district health executive.

Table 28: Place of work by cadre

Place of work	EHPs	Midwives	Nurses	Doctors	Total
Central hospital	0	20	19	0	**39**
Provincial hospitals	0	10	13	1	**24**
Rural hospital	2	0	11	0	**13**
Rural health centre (Government)	0	0	6	0	**6**
Rural health centre (RDC)	2	2	13	0	**17**
Government clinic	0	0	2	0	**2**
Mission hospital	3	16	30	1	**50**
Mission clinic	0	0	1	0	**1**
Municipal hospital	0	0	1	0	**1**
Municipal clinic	2	37	26	0	**65**
Other (e.g. municipal head office)	8	1	0	0	**9**
Total	**17**	**86**	**122**	**2**	**227**

82% of EHPs, 85% midwives and 72% nurses had ever been in government employment although there were no significant differences. All the doctors had been in government employment as shown in Table 29.

Table 29: Have ever been in government employment

Cadre	Yes n (%)	No n (%)	Total n (%)
EHPs	14(82.4)	3(17.7)	17(7.5)
Midwives	73(84.9)	13(15.1)	86(37.9)
Nurses	88(72.1)	34(27.9)	122(53.7)
Doctor	2(100.0)	0(0.0)	2(0.9)
Total	177(78.0)	50(22.0)	227(100.0)
p-value	***0.134***		

The majority of the EHPs (65%) and less than half (45%) of midwives had moved from the public sector to the current post. 40% cadres had moved from the public sector with almost a third (30%) of those who had moved being nurses. One factor may be that a period of rural employment is obligatory at initial deployment for all cadres.

Table 30: Number of HRH who have moved from public sector by cadre

Cadre	**Total** **N**	**Yes** **n(%)**
EHPs	17	11(64.7)
Midwives	86	42(44.8)
Nurses	122	37(30.3)
Doctor	2	1(50.0)
Total	**227**	**91(40.1)**

Table 31 shows that the majority of male EHPs (73%) had worked and later moved from the public sector. About half of the midwives had moved from public sector to other sectors (both sexes) while 32% versus 26% of female versus male nurses had moved from the other sectors to the public sector. This is a manifestation of the internal labour market.

Table 31: Number of HRH who have moved from public sector by cadre and gender

Gender	**Males**		**Females**	
Cadre	**Total** **N**	**Moved** **n (%)**	**Total** **N**	**Moved** **n (%)**
EHPs	11	8(72.7)	6	3(50.0)
Midwives	6	3(50.0)	80	39(48.8)
Nurses	31	8(25.8)	91	29(31.9)
Doctor	2	1(50.0)	0	0(0.0)
Total	**50**	**20(40.0)**	**177**	**71(41.1)**
p-value	***<0.001***			

Workload

The median number of hours worked reported does not vary much across the districts or across cadres (40 hours per week), although there are some high maximums for nurses and midwives in district 3 (Table 32). Doctors in district 2 worked for 64-94 hours per week.

Table 32: Number of hours worked per week by profession and district

District	**District 1**			**District 2**			**District 3**			
Cadre	**Median**	**Min**	**Max**	**Median**	**Min**	**Max**	**Median**	**Min**	**Max**	***p-value***
EHPs	40	40	40	40	40	45	40	40	40	*0.301*
Midwives	40	39	66	40	40	60	40	40	96	*0.300*
Nurses	40	40	60	40	8	60	40	40	96	*0.235*
Doctors	-	-	-	79	64	94	-	-	-	-
TOTAL	**40**	**39**	**66**	**40**	**8**	**94**	**40**	**40**	**96**	***0.158***

Analysed by sector, the median workloads remain the same but some of the higher maximum hours worked are in the mission and municipal sectors (Table 33). Midwives in the mission sector reported significantly higher hours (96 hours) worked per week than the other sectors.

Table 33: Number of hours worked per week by profession and sector

Sector	**Government**			**Municipality**			**Mission**			
Cadre	**Median**	**Min**	**Max**	**Median**	**Min**	**Max**	**Median**	**Min**	**Max**	***p-value***
EHPs	40	40	40	40	40	40	40	40	45	*0.097*
Midwives	40	40	48	40	39	66	42.5	40	96	*0.004*
Nurses	40	40	60	41	8	96	40	40	60	*0.058*
Doctors	94	94	94	-	-	-	64	64	64	-
TOTAL	**40**	**40**	**60**	**40**	**8**	**96**	**40**	**40**	**96**	***0.002***

The difference between the number of hours worked in a week between males and females was not signficiant (*p-value = 0.504).*

3. Training

72% of the respondents had ever attended short courses training or seminars. 42% had done post-basic training funded by the MoHCW, with a further 7% receiving donor-funded post-basic training (these were nurses). About 19% had received in-service or in-house training. (Figure 3)

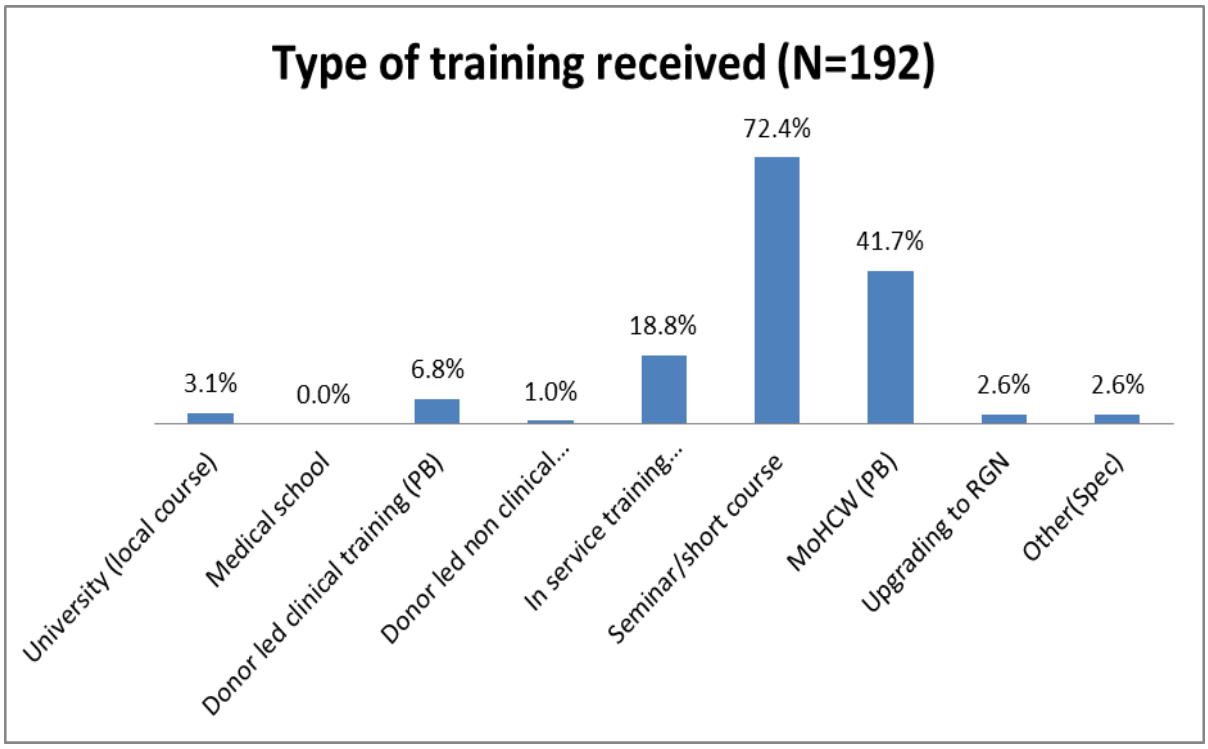

Figure 3: Type of training received in current employment

Looking at overall training ever received by cadre, we find significant differences, with a higher proportion of midwives reporting having received training, followed by EHPs and then nurses (Table 34).

Table 34: Received training across cadres

Cadre	Total	Yes

	N	n (%)
EHPs	17	15(88.2)
Midwives	86	82(95.4)
Nurses	122	93(76.2)
Doctors	2	2(1.0)
Total	**227**	**192(100.0)**
p-value	***0.002***	

By sector, municipal workers were most likely to have received training (91%), versus 86% in the government sector and 71% in the mission *(p-value = 0.005)* (Table 35).

Table 35: Received training across sectors

Sector	**Total** **N**	**Yes** **n (%)**
Government	86	74(86.1)
Municipality	90	82(91.1)
Mission	51	36(70.6)
Total	**227**	**192(84.6)**
p-value	***0.005***	

There were no significant differences between males and females who received training (*p-value = 0.753)* or between districts (*p-value = 0.262).*

Types of training expected

Significantly more female cadres than the male cadres are expecting to receive training *(p-value = 0.031)* as shown in Table 36.

Table 36: Expecting to receive training by profession and gender

Cadres	**Males** **n (%)**	**Females** **n (%)**	***p-value***
EHPs	10(62.5)	6(37.5)	*0.446*
Midwives	6(8.3)	66(91.7)	*0.263*
Nurses	29(28.7)	72(71.3)	*0.066*
Doctors	2(100.0)	-	-
Total	**47(24.6)**	**144(75.4)**	***0.031***

Significant differences were found across sectors in relation to training expenditure (Table 37). The government sector reported a higher proportion of cadres who are expecting further training and this can be attributed to the fact that this sector had a younger workforce (49% of those aged between 25-35 years work in this sector) who were interviewed.

Table 37: Expecting to receive training by profession and sector

Cadre	**Government** **n (%)**	**Municipality** **n (%)**	**Mission** **n (%)**	***p-value***
EHPs	3(18.8)	10(62.5)	3(18.8)	*0.748*
Midwives	29(40.3)	29(40.3)	14(19.4)	*0.087*
Nurses	42(41.6)	30(29.7)	29(28.7)	*0.121*
Doctors	1(50.0)	-	1(50.0)	-
Total	**75(39.3)**	**69(36.1)**	**47(24.6)**	***0.033***

Benefits of training

When asked in an open question, almost 78% of cadres mentioned greater knowledge as the main benefit of training while 63% mentioned skills and ability. About 30% mentioned enhanced professional reputation/status as the main benefit of training whilst around 20% cited increased confidence as the main benefit (Figure 4).

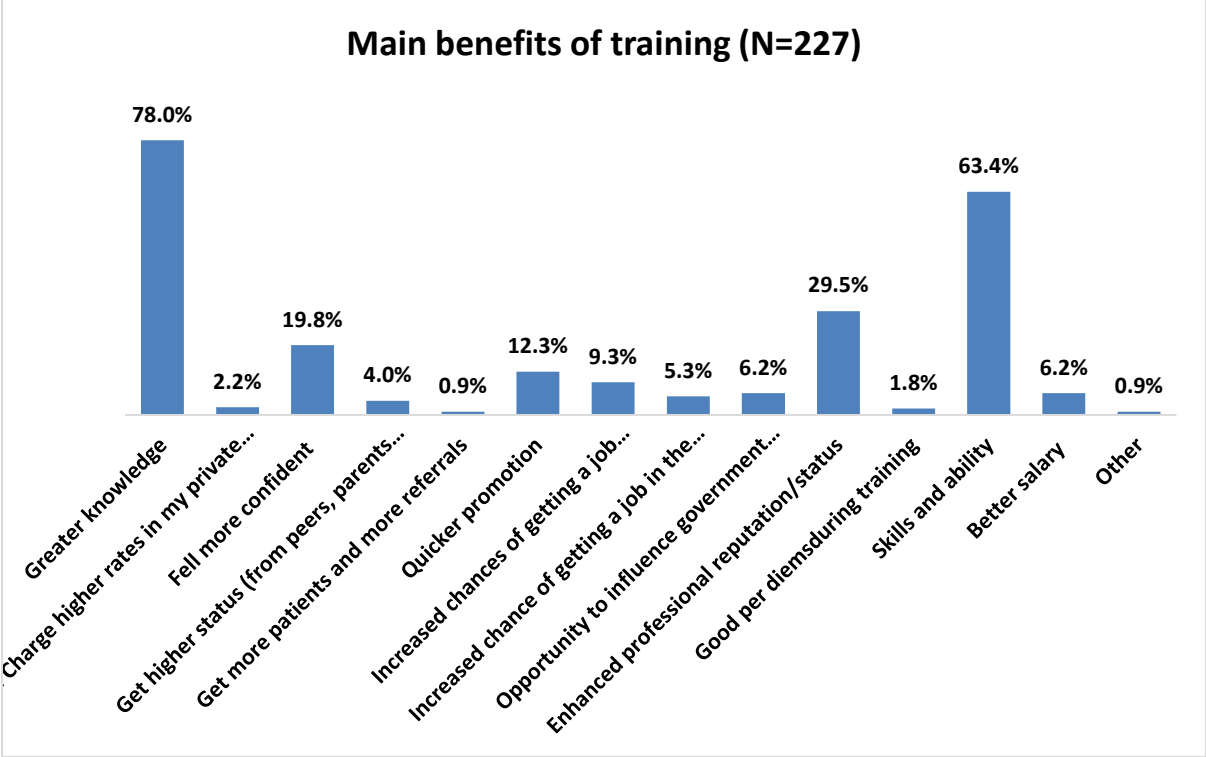

Figure 4: Main benefits of training

By profession, perceived benefits of training do not show large differences (Table 38)

Table 38: Benefits of training by profession

Benefit of training	**EHPs n (%)**	**Midwives n (%)**	**Nurses n (%)**	**Doctors n (%)**	***p-value***
Greater knowledge	12(70.6)	74(86.1)	89(73.0)	2(100.0)	*0.104*
Can charge higher rates in my private practice	0(0.0)	0(0.0)	4(3.3)	1(50.0)	*<0.001*
Feel more confident	3(17.7)	18(20.9)	24(20.0)	0(0.0)	*0.893*
Get higher status (from peers, parents and public)	1(5.9)	4(4.7)	4(3.3)	0(0.0)	*0.918*
In-house/in service training (clinical/non-clinical)	0(0.0)	0(0.0)	0(0.0)	0(0.0)	-
Get more patients and more referrals	0(0.0)	2(2.3)	0(0.0)	0(0.0)	*0.347*

Quicker promotion	1(5.9)	13(15.1)	14(11.5)	0(0.0)	*0.652*
Increased chance of getting a job with an international organisation	1(5.9)	13(15.1)	7(5.7)	0(0.0)	*0.124*
Increased chance of getting a job in the diaspora	0(0.0)	5(5.8)	7(5.7)	0(0.0)	*0.763*
Opportunity to influence government policy Improved/More job opportunities	3(17.7)	4(4.7)	7(5.7)	0(0.0)	*0.223*
Enhanced professional reputation/status	5(29.4)	32(37.2)	30(24.6)	0(0.0)	*0.195*
Good per diems during training.	1(5.9)	0(0.0)	3(2.5)	0(0.0)	*0.310*
Skills and ability	10(58.8)	59(68.6)	73(59.8)	2(100.0)	*0.395*
Improved working conditions	1(5.9)	0(0.0)	1(0.8)	0(0.0)	*0.130*
Better salary	1(5.9)	8(9.3)	5(4.1)	0(0.0)	*0.476*

Ranking of benefits of training, by profession

Participants were asked to rank their top 3 benefits of training. Aggregated scores are shown below (Table 39) with highest benefits being ranked 5 and the lowest ranked 1. Greater knowledge had the highest rank as a benefit of training with an average score of 4.5, followed by skills and ability (4.2) and enhanced professional reputation/status (4.1).

Table 39: Average score for the benefits of training by profession (top five factors)

	Average scores				**Total**
Benefit of training	**EHPs**	**Midwives**	**Nurses**	**Doctors[4]**	**Average Score**
Greater knowledge	4.4	4.5	4.6	5.0	4.5

[4]This average is not reliable as there were only 2 Doctors in the data set

Skills and ability	4.4	4.2	4.3	4.0	4.2
Enhanced professional reputation/status	4.6	4.0	4.1	-	4.1
Feel more confident	3.7	3.6	4.2	-	4.0
Quicker promotion	4.0	3.7	4.3	-	4.0

4. Income from main health care work

Net monthly salary

The median monthly salary was $800 for EHPs, $250 for Nurses, $291 for midwives and $393 for doctors. There was a significant difference (*p-value < 0.001)* in the monthly salary of cadres as shown in Table 40.

Table 40: Basic net monthly salary from official job by cadre (USD)

Cadre	**Median**	**Minimum**	**Maximum**
EHPs	800	210	2,700
Midwives	291	200	2,200
Nurses	250	199	1,800
Doctors	393	285	500
Total	**250**	**199**	**2,700**
p-value	***<0.001***		

Respondents were asked about their last month's salary. The salaries in the municipalities are more than four times the salary in the government and mission sectors. Figure 5 shows that the median salary for EHPs was $250, $1100 and $232 for the government, municipality and mission sector respectively. A median salary of $250, $1730 and $249 was received by midwives in the government, municipality and mission sector respectively. The median salary for nurses was $250, $1000 and $240 for the government, municipality and mission sector respectively. The median salary for the doctor who was working in the government sector was $500 while the median salary for the doctor in the

mission sector was $285. Doctors in the municipality did not participate. There were significant differences in the salaries received across all sectors.

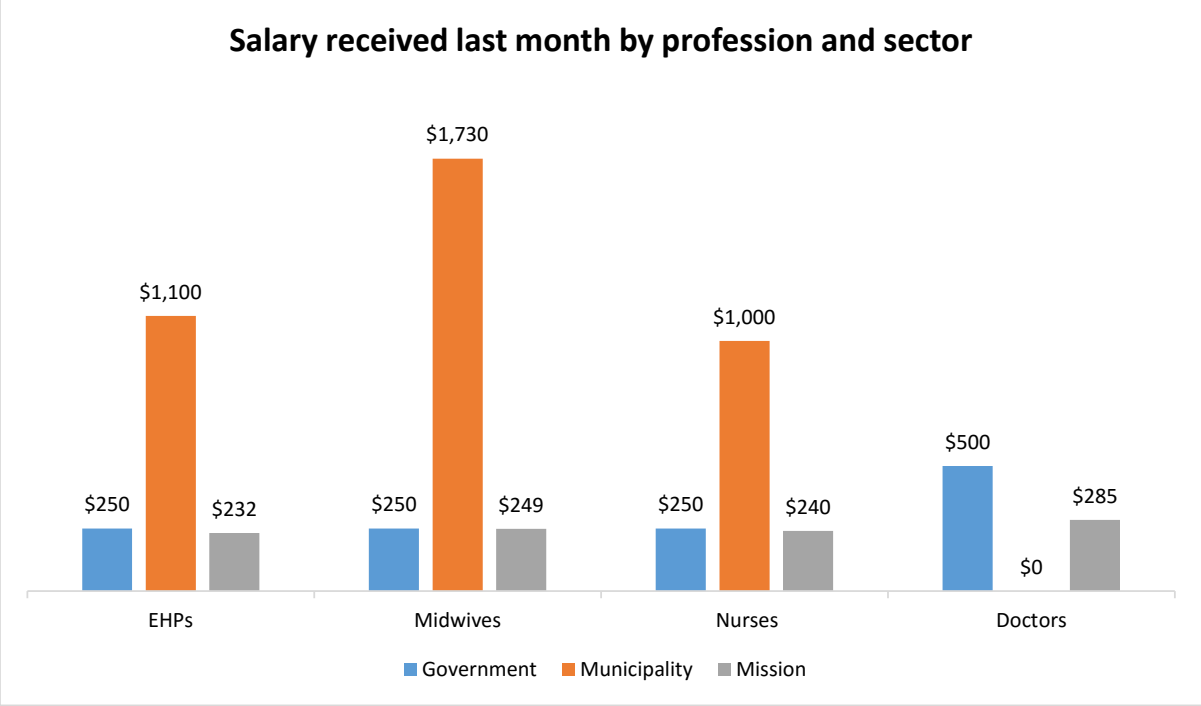

Figure 5: Salary received last month by profession and sector (USD).

Whether the salary is regular, and how it has changed over 3 years

Table 41 shows that all government and mission sector cadres' salaries were regular while in the municipality 91% of EHPs, 74% of midwives and 92% of nurses reported receiving salaries regularly.

Table 41: Whether the salary is regular by profession and sector

Sector	Government		Municipality		Mission	
Cadre	Total N	Yes (n %)	Total N	Yes (n %)	Total N	Yes (n %)
EHPs	3	3(100.0)	11	10(90.9)	3	3(100.0)
Midwives	31	31(100.0)	39	29(74.4)	16	16(100.0)
Nurses	51	51(100.0)	38	35(92.1)	31	31(100.0)
Doctors	1	1(100.0)	0	0(0.0)	1	1(100.0)

Total	**86**	**86(100.0)**	**90**	**74(82.2)**	**51**	**51(100.0)**

132 (63%) of all cadres reported that their salaries had changed in the past three years. Of these 99% said the salary had increased (Table 42). We have not presented estimates of change in income as there was a high level of non-response (47%) to this question which was not easy for respondents to answer due to the change in currency.

Table 42: How the salary has changed over 3 years by profession and sector

Sector	**Government**		**Municipality**		**Mission**	
Cadre	**Yes**	**No**	**Yes**	**No**	**Yes**	**No**
EHPs	3(100.0)	0(0.0)	6(60.0)	4(40.0)	1(33.3)	2(66.7)
Midwives	24(77.4)	7(22.6)	24(80.0)	6(20.0)	7(43.8)	9(56.3)
Nurses	28(54.9)	23(45.1)	20(58.8)	14(41.2)	18(58.1)	13(41.9)
Doctors	0(0.0)	1(100.0)	-	-	1(100.0)	0(0.0)
Total	**55(64.0)**	**31(36.1)**	**50(67.6)**	**24(32.4)**	**27(52.9)**	**24(47.1)**
p-value	***0.052***		***0.168***		***0.528***	

Allowances

Rural area allowance (RAA)

RAA is a fixed allowance paid to health workers in rural areas. Table 43 shows that the median RAA received by EHPs and midwives was $13. The median RAA for nurses was $12 while the median RAA for doctors was $60. There are 29 health care cadres who did not know the amount of the RAA they received and 149 did not receive RAA as they were in district 1, which is urban.

Table 43: Rural area allowance received by profession (USD)

Cadres	**Median**	**Minimum received**	**Maximum received**
EHPs	13	13	20

Midwives	13	10	100
Nurses	12	10	150
Doctors	60	60	60
Total	**12**	**10**	**150**
p-value	***0.015***		

The median RAA received by EHPs in district 2 was $17 while EHPs in district 3 received $13 as shown in Table 44. The median RAA received by midwives in district 2 and 3 was $14 and $13 respectively. Nurses in district 2 received a median RAA of $12 while those in district 3 also received $12.

Table 44: Rural area allowance received by profession and district (USD)

Districts	**District 2**			**District 3**			
Cadre	**Median**	**Min**	**Max**	**Median**	**Min**	**Max**	***p-value***
EHPs	17	13	20	13	13	13	*0.480*
Midwives	14	12	100	13	10	100	*0.519*
Nurses	12	10	12	12	10	150	*0.176*
Doctors	60	60	60	-	-	-	-
Total	**12**	**10**	**100**	**12**	**10**	**150**	***0.906***

Table 45 illustrates that the median RAA received by male EHPs was $13 while females received $20. The median RAA received by female midwives was $123.The median RAA received by both male nurses and female nurses was $12.

Table 45: Rural area allowance received by profession and gender (USD)

Gender	**Males**			**Females**			
Cadre	**Median**	**Min**	**Max**	**Median**	**Min**	**Max**	***p-value***
EHPs	13	13	13	20	20	20	*0.157*
Midwives		-	-	13	10	100	-
Nurses	12	11	100	12	10	150	*0.321*

Doctor	60	60	60	-	-	-	-
Total	**13**	**11**	**100**	**12**	**10**	**150**	***0.305***

Table 46 depicts that the median RAA received by EHPs in the government sector was $17 while EHPs in the mission sector received $13. Midwives in RDC received a median RAA of $13 while those in the mission sector received $14. Midwives in the government sector did not report any RAA (few midwives were employed by the government in the rural areas). The median RAA received by nurses was $13, $12 and $11 in the government, municipality and mission sectors respectively. There were some significant differences in the RAA received by nurses across sectors.

Table 46: Rural Area Allowance received by profession and sector (USD)

Sector	**Government**			**RDC**			**Mission**			
Cadre	**Median**	**Min**	**Max**	**Median**	**Min**	**Max**	**Median**	**Min**	**Max**	***p-value***
EHPs	17	13	20	-	-	-	13	13	13	*0.480*
Midwives	-	-	-	13	12	13	14	10	100	*0.654*
Nurses	13	12	100	12	12	150	11	10	12	*<0.001*
Doctor	-	-	-	-	-	-	60	60	60	-
Total	**13**	**12**	**100**	**12**	**12**	**150**	**12**	**10**	**100**	***0.015***

Note: the RDCs do no employ EHPs, hence the gaps in this table

A total of 74 (33%) reported receiving rural area allowance. All of them indicated that the RAA was fixed per month and regular.

Reported changes over three years to the RAA

Of the 74 cadres who reported changes in the RAA in the previous years, 4 said it was a new allowance, 33 said it existed before and has increased. Almost half (49%) of the health workers in the mission sector and a third of the health workers (30%) in government reported an increase to their RAA. Of the 33 respondents that cited an increase in the RAA only seven knew the actual amount by which it increased and this ranged from a minimum of $2 and a maximum of $60 as shown in

Table 47.

Table 47: Increased RAA by profession and sector (USD)

Cadre	Government n (%)	RDC n (%)	Mission n (%)	Total n (%)
EHPs	2(20.0)	0(0.0)	0(0.0)	**2(6.1)**
Midwives	0(0.0)	0(0.0)	6(37.5)	**6(18.2)**
Nurses	8(80.0)	7(100.0)	9(56.3)	**24(72.7)**
Doctors	0(0.0)	0(0.0)	1(6.3)	**1(3.0)**
Total(responses, not respondents)	**10(100.0)**	**7(100.0)**	**16(100.0)**	**33(100.0)**

Other supplements ***Error! Reference source not found.*** There are other additional allowances that cadres receive in the three sectors and participants were asked to mention these allowances and their monetary value. Figure 6 illustrates the median allowances received by the different cadres. Doctors received a total median allowance of $1,210. The total median allowance for EHPs, midwives and nurses was $209, $333 and $263 respectively.

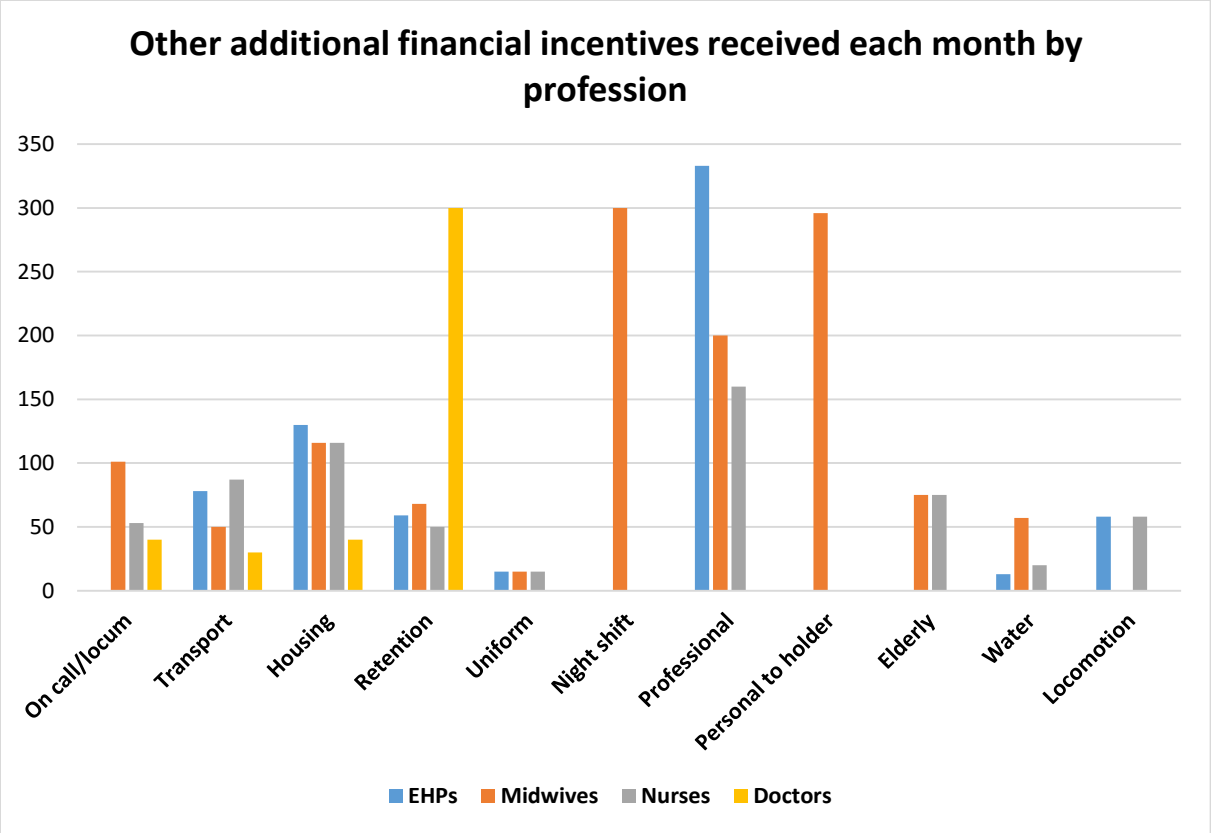

Figure 6: Other additional financial incentives[5] received each month by profession (USD)

Table 48 depicts that the additional financial income as percentage of median monthly salary of midwives in the government, municipality and mission sectors was 131%, 29% and 85% respectively.

Table 48: Other additional financial or incentives received each month by sector for midwives (USD)

Sector	Government			Municipality			Mission		
Allowances	**Median**	**Min**	**Max**	**Median**	**Min**	**Max**	**Median**	**Min**	**Max**
On call/locum	101	32	448	-	-	-	-	-	-
Transport	95	10	100	28	20	100	95	13	120

[5] **Personal to holder allowance** is paid to health workers who remained in employment during the crisis.
Professional allowance is an additional incentive of 20% of basic salary first introduced in 2008 and is still paid to health workers working for the municipality in district 1
Elderly allowance is paid to health workers 60 years and above , until retirement at age 65 in district It is an allowance that is meant to acknowledge their commitment to the municipality.

Housing	95	10	131	180	25	424	80	15	116
Retention	60	50	142	300	59	380	52	40	101
Uniform	10	5	15	43	9	112	10	3	15
Night shift	-	-	-	300	90	518	-	-	-
Professional	-	-	-	200	160	339	-	-	-
Personal to holder	-	-	-	296	200	380	-	-	-
Elderly	-	-	-	75	75	75	-	-	-
Water	-	-	-	57	14	100	-	-	-
Total	**349**	**80**	**663**	**452**	**130**	**999**	**210**	**99**	**283**
Percentage of monthly salary	**131.3**	**32**	**241.1**	**28.7**	**12.6**	**118.9**	**85.1**	**28.3**	**115.0**

Table 49 illustrates that the additional financial income as a percentage of median monthly salary of nurses in the government, municipality and mission sectors was 106%, 28% and 94% respectively.

Table 49: Other additional financial or incentives received each month by sector for nurses (USD)

Sector	**Government**			**Municipality**			**Mission**		
Allowances	**Median**	**Min**	**Max**	**Median**	**Min**	**Max**	**Median**	**Min**	**Max**
On call/locum	450	46	2,400	-	-	-	35	30	560
Transport	95	11	120	29	20	100	90	10	100
Housing	95	15	116	150	70	424	100	10	116
Retention	50	30	85	49	20	380	46	38	101
Uniform	10	7	20	28	8	46	12	10	15
Professional	-	-	-	160	72	339	-	-	-
Elderly	-	-	-	75	70	75	-	-	-
Water	-	-	-	20	10	30	-	-	-
Locomotion	-	-	-	58	58	58	-	-	-

Total	**259**	**56**	**2,560**	**271**	**138**	**802**	**252**	**30**	**307**
Percentage of monthly salary	**105.6**	**16.3**	**1066.7**	**27.7**	**13.4**	**120.7**	**93.5**	**11.70**	**132.3**

The additional financial income as a percentage of median monthly salary for EHPs in the government, municipality and mission sectors was 72%, 33% and 57% respectively as depicted in Table 50.

Table 50: Other additional financial or incentives received each month by sector for EHPs (USD)

Sector	**Government**			**Municipality**			**Mission**		
Allowances	**Median**	**Min**	**Max**	**Median**	**Min**	**Max**	**Median**	**Min**	**Max**
Transport	58	15	100	60	30	100	100	100	100
Housing	73	30	116	130	94	416	116	116	116
Retention	59	58	60	52	52	52	80	80	80
Uniform	10	10	15	13	10	15	15	15	15
Professional	-	-	-	333	320	400	-	-	-
Locomotion	-	-	-	58	50	84	-	-	-
Water	-	-	-	13	13	13	-	-	-
Total	**202**	**113**	**291**	**209**	**180**	**860**	**311**	**311**	**311**
Percentage of median monthly salary	**71.7**	**26.9**	**116.4**	**33.4**	**11.8**	**107.5**	**56.5**	**56.5**	**56.5**

Retention allowance

The retention allowance is a top up available to all staff in all sectors which is calculated as a proportion of monthly salaries. The median retention allowance received by male and female EHPs was $70 and

$55 respectively. Male and female midwives received $75 and $68 respectively while male and female nurses received $51 and $46 respectively. There were no significant differences between male and female cadres.

The median retention allowance received by cadres in district 1 was $70 and in districts 2 and 3 it was $50. There were some significant differences (p-value < 0.001) between districts.

Nature and regularity of retention allowances by cadre

All EHPs and doctors reported the retention allowance to be fixed, as did 67% and 66% of midwives and nurses respectively (Table 51).

Table 51: Consistency in payment of retention allowances by cadre

Cadres	**Fixed n(%)**	**Workload related n(%)**	**Not fixed n(%)**	**Total n(%)**
EHPs	6(100.0)	0(0.0)	0(0.0)	**6(100.0)**
Midwives	27(67.5)	2(5.0)	11(27.5)	**40(100.0)**
Nurses	54(65.9)	2(2.4)	26(31.7)	**82(100.0)**
Doctors	2(100.0)	0(0.0)	0(0.0)	**2(100.0)**
Total	**89(68.5)**	**4(3.1)**	**37(28.5)**	**130(100.0)**

Regularity in receipt of the retention allowance varied, from 33% of EHPs receiving it always to 100% for the two doctors (

Table 52).

Table 52: Whether retention allowance is received regularly by profession

Cadres	Always	Sometimes	Total
EHPs	2(33.3)	4(66.7)	6(100.0)
Midwives	23(57.5)	17(42.5)	40(100.0)
Nurses	32(39.0)	50(61.0)	82(100.0)
Doctors	2(100.0)	0(0.0)	2(100.0)
Total	**59(45.4)**	**71(54.6)**	**130(100.0)**

Reported changes over three years to the retention allowance

Table 53 shows that 62%, 19% and 49% of the cadres in the government, municipality and mission sectors reported changes in the retention allowance in the three years preceding the survey.

Table 53: Reported changes over the previous few years to the retention allowance by profession and sector

Sector	Government		Municipality		Mission	
Cadres	**Yes n(%)**	**Total N**	**Yes n(%)**	**Total N**	**Yes n(%)**	**Total N**
EHPs	2(66.7)	3	1(9.1)	11	0(0.0)	3
Midwives	16(51.6)	31	4(10.3)	39	6(37.5)	16
Nurses	35(68.6)	51	12(30.0)	40	18(58.1)	31
Doctors	0(0.0)	1	-	0	1(100.0)	1
Total	**53(61.6)**	**86**	**17(18.9)**	**90**	**25(49.0)**	**51**

User fees

No health workers from any sector reported receiving payments from user fees. This conforms with the long-standing official policy, which was recently re-emphasised in the Health Service Act (2006).

Per diems

Per-diems were an important aspect of income enhancement and questions were asked about income received from per diems in the past month. However, due to inconsistencies in responses, it was difficult coming up with insightful findings.

Benefits in kind

Benefits received in kind, by profession

Slightly above 50% of the health care cadres mentioned receiving health care as a benefit in kind while about 40% received housing (Figure 7).

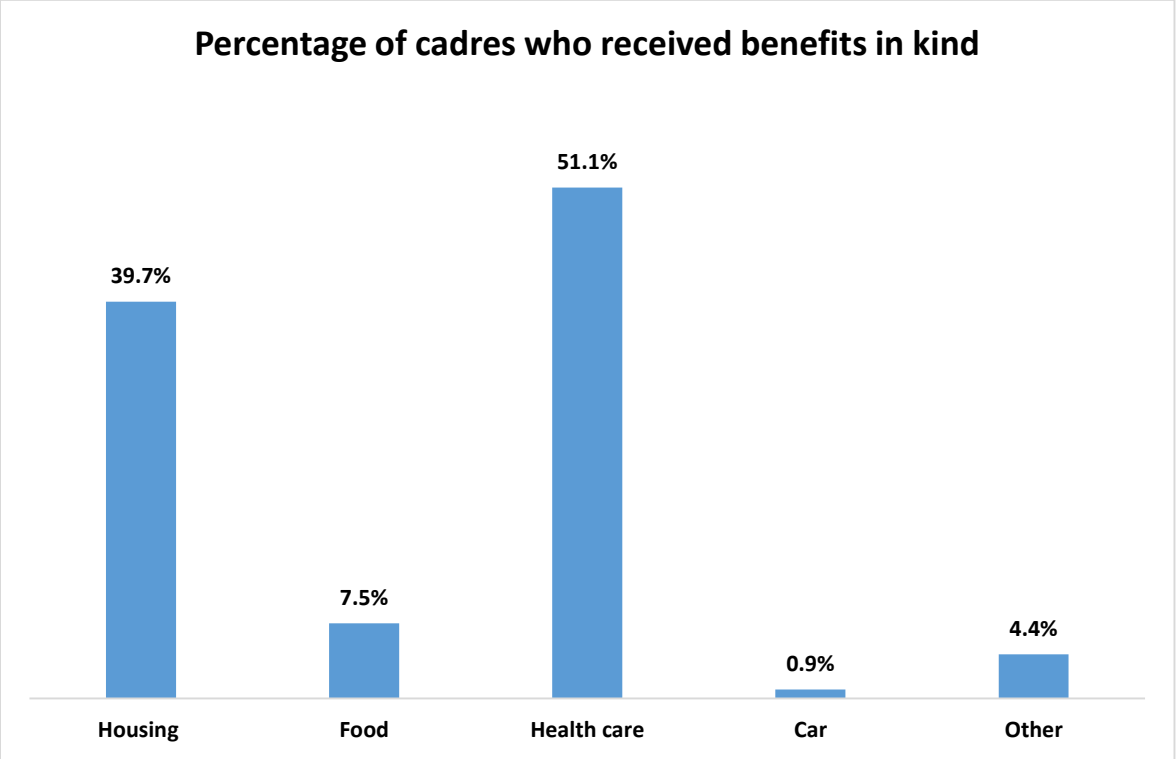

Figure 7: Percentage of cadres who received benefits in kind

Of the 116 cadres who mentioned receiving health care as a benefit in kind, the highest proportion was among EHPs (65%), followed by nurses (61%) and midwives (36%) (Table 54). The highest

proportion of the cadres who mentioned receiving free accommodation were EHPs (53%), followed by nurses (45%) and midwives with (28%).

Table 54: Benefits received in kind by profession

Cadre	Housing n (%)	Food n (%)	Health Care n (%)	Total n (%)
EHPs	9(52.9)	0(0.0)	11(64.7)	**17(7.5)**
Midwives	24(27.9)	5(5.8)	31(36.0)	**86(37.9)**
Nurses	55(45.1)	12(9.8)	74(60.7)	**122(53.7)**
Doctor	2(100.0)	0(0.0)	0(0.0)	**2(0.9)**
Total	**90(39.6)**	**17(7.5)**	**116(51.1)**	**227(100.0)**

A total of 50 (58%) cadres in the government sector received the benefit of health care in kind, compared to 27% of cadres in the municipality and 83% of cadres in the mission sector. The benefits in kind presented which include housing, food and health care were those mentioned most by cadres (Figure 8)

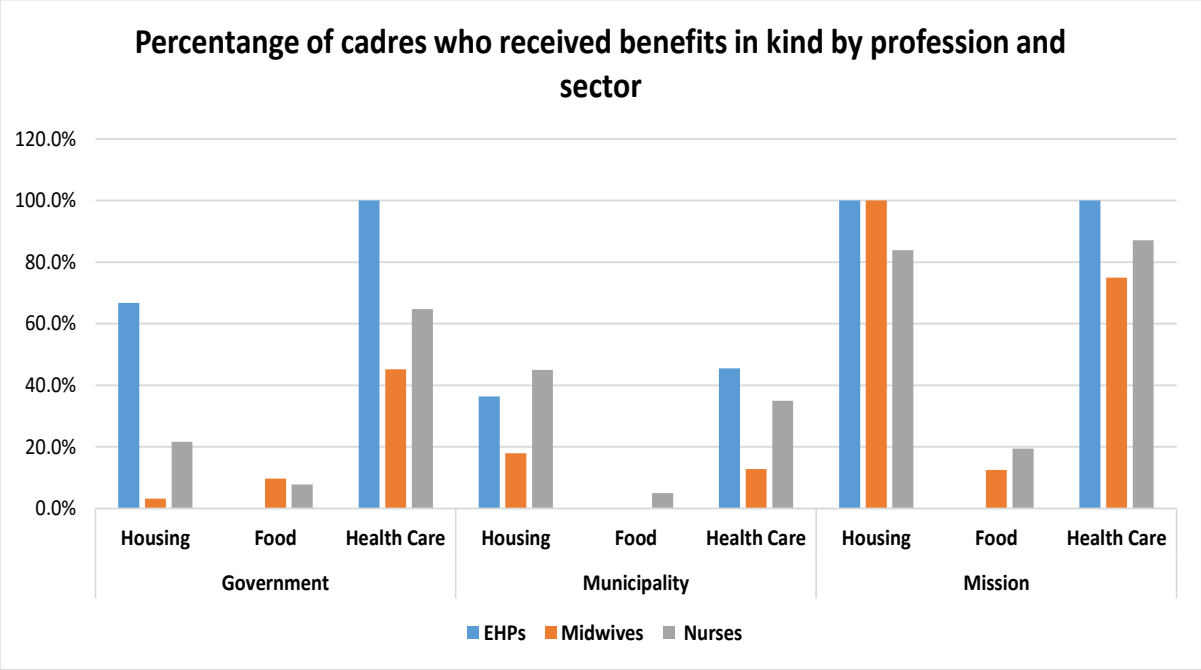

Figure 8: Percentage of cadres who received Benefits in kind by profession and sector

While the survey also asked about gifts, no respondents reported any monetary gifts. This may reflect hesitation to report them, or may indicate that this tradition is reducing as official payments for health care and demands for clients to bring in supplies etc. have increased.

Total main income

Total income refers to all income from main work including allowances.

Table 55 shows that there are significant differences between districts, with the total median income for the 3 districts being $1,300 in district 1, $252 in district 2 and $241 in district 3 *(p-value < 0.001)*. This is largely driven by the different sectoral make-up of the sample in the districts, with district 1 having a substantial municipality component.

Table 55: Total income from main or official employment per month by profession and district (USD)

Districts	District 1			District 2			District 3			
Cadre	**Median**	**Min**	**Max**	**Median**	**Min**	**Max**	**Median**	**Min**	**Max**	***p-value***
EHPs	1,500	1,000	2,700	800	420	1,625	241	210	286	*0.001*
Midwives	1,303	200	2,200	253	235	900	249	200	258	*<0.001*
Nurses	1,000	200	2,203	250	200	860	240	199	300	*<0.001*
Doctor	-	-	-	393	285	500	-	-	-	-
Total	**1,300**	**200**	**2,700**	**252**	**200**	**1,625**	**241**	**199**	**300**	*<0.001*

The total median income for all cadres in the Government, Municipality and Mission sectors was $250, $1,303 and $246 respectively. There were significant differences across sectors (Table 56).

Table 56: Total income from main or official employment per month by profession and sector (USD)

Sector	Government			Municipality			Mission			
Cadre	**Median**	**Min**	**Max**	**Median**	**Min**	**Max**	**Median**	**Min**	**Max**	***p-value***
EHPs	250	210	420	1,100	258	2,700	232	219	550	*0.014*
Midwives	250	200	485	1,730	249	2,200	249	200	350	*<0.001*
Nurses	250	200	434	1,000	200	2,203	240	199	400	*<0.001*
Doctor	500	500	500	-	-	-	285	285	285	-
Total	**250**	**200**	**500**	**1,303**	**200**	**2,700**	**246**	**199**	**550**	*<0.001*

There were no significant differences in the total income earned by male and female cadres as shown in Table 57

Table 57: Total income from main or official employment per month by profession and gender (USD)

Gender	Males			Females			
Cadre	**Median**	**Min**	**Max**	**Median**	**Min**	**Max**	***p-values***

EHPs	1,100	219	2,700	353	210	800	*0.107*
Midwives	746	230	2,200	291	200	2,200	*0.904*
Nurses	250	200	1,552	250	199	2,203	*0.691*
Doctor	393	285	500	-	-	-	-
Total	**253**	**200**	**2,700**	**250**	**199**	**2,203**	***0.585***

How total official income has changed over the last 5 years

Of the 227 respondents who were interviewed, 58% (131) mentioned that income from their main job had changed between 2007 and 2012. 99% (130) said their income had increased while only 1% said it had decreased.

The highest proportion of EHPs (29%) who reported an increase in total primary income were in district 3. The highest proportion of midwives (41%) who reported an increase in total primary income were in district 1 while that of nurses (21%) was in district 3 as shown in Table 58.

Table 58: Cadres whose total official income has increased between 2007 and 2012 by profession and district

Cadre	District 1 n(%)	District 2 n(%)	District 3 n(%)	Total n(%)
EHPs	3(17.6)	2(11.8)	5(29.4)	17(100.0)
Midwives	35(40.7)	15(17.4)	4(4.7)	86(100.0)
Nurses	18(14.8)	21(17.2)	26(21.3)	122(100.0)
Doctor	0(0.0)	1(50.0)	0(0.0)	2(100.0)
Total	**56(42.8)**	**39(29.8)**	**36(27.5)**	**131(100.0)**

The highest proportion of EHPs (35%) whose total official income had increased between 2007 and 2012 were males. The highest proportion of midwives (59%) who reported an increase in total primary income were females whilst the highest proportion for nurses (41%) were males as shown in Table 59

.

Table 59: Cadres whose total official income has increased between 2007 and 2012 by profession and gender

Cadre	Males n(%)	Females n(%)	Total n(%)
EHPs	6(35.3)	4(23.5)	**17(100.0)**
Midwives	3(3.5)	51(59.3)	**86(100.0)**
Nurses	50(41.0)	45(36.9)	**122(100.0)**
Doctor	1(50.0)	0(0.0)	**2(100.0)**
Total	**30(22.9)**	**101(77.1)**	**131(100.0)**

The highest proportion of EHPs (35%) and midwives (28%) whose total official income had increased between 2007 and 2012 were in the municipality sector whilst the highest proportion of nurses (22%) were in the government sector as shown in Table 60.

Table 60: Cadres whose total primary income has increased between 2007 and 2012 by profession and sector

Cadre	Government	Municipality	Mission	Total
EHPs	3(17.6)	6(35.3)	1(5.9)	**17(100.0)**
Midwives	23(26.7)	24(27.9)	7(8.1)	**86(100.0)**
Nurses	27(22.1)	20(16.4)	18(14.8)	**122(100.0)**
Doctor	0(0.0)	0(0.0)	1(50.0)	**2(100.0)**
Total	**54(41.2)**	**50(38.2)**	**27(20.6)**	**131(100.0)**

5. Private practice

There were only 12 out of 210 health workers who reported getting private income (1 Doctor, 6 Nurses and 5 Midwives).

The range of hours worked is 2 to 36 hours per week and the mean is 17.5. Of those doing private practice, there were 9 females and 3 males. 11 of those doing private practice were working in government, while 1 was in the mission sector.

The median private income earned by midwives was $200, while nurses earned $438 as depicted in Table 61.

Table 61: Private income earned per month by profession (USD)

Cadres	Median	Minimum received	Maximum received
Midwives	200	40	700
Nurses	438	70	2,400
Doctors	2,000	2,000	2,000
Total	**450**	**40**	**2,400**

Of the 12 cadres who had private income, 42% reported changes in private income since 2007. The amount by which private income had changed was not reported because of the two financial systems in operation in the period in question the Zimbabwe dollar 2007-2008 and the American dollar 2009-2012.

Additional income

Respondents were asked about the income-generating activities (IGA) outside of the health sector that they were involved in. A third (33%) mentioned that they were carrying out non-medical income generating activities with the EHPs (42%) having the highest proportion mentioning involvement in IGA (Table 62).

Table 62: Income-generating or any other activities by profession

Cadre	Yes n(%)	No n(%)	Total n(%)
EHPs	7(41.2)	10(58.8)	**17(100.0)**
Midwives	23(26.7)	63(73.3)	**86(100.0)**
Nurses	44(36.1)	78(63.9)	**122(100.0)**
Doctor	1(50.0)	1(50.0)	**2(100.0)**
Total	**75(33.0)**	**152(67.0)**	**227(100.0)**

Income generating activities are more common in the government sector in general, but this difference was not significant (Table 63).

Table 63: Income-generating or any other activities by profession and sector

Sector	Government		Municipality		Mission		
Cadre	**Yes n(%)**	**Total N**	**Yes n(%)**	**Total N**	**Yes n(%)**	**Total N**	***p-value***
EHPs	2(66.7)	3	4(46.4)	11	1(33.3)	3	*0.473*
Midwives	10(32.3)	31	8(20.5)	39	5(31.3)	16	*0.285*
Nurses	22(43.1)	51	11(27.5)	40	11(35.5)	31	*0.364*
Doctor	1(100)	1	0(0.0)	0	0(0.0)	1	-
Total	**35(40.7)**	**86**	**23(25.6)**	**90**	**17(33.3)**	**51**	***0.102***

There were no significant differences in carrying out income generating activities by gender , sector or districts.

6. Total income from all sources (public, private, and additional)

The median total income from all sources for EHPs was $800. Midwives reported median total income of $350. The median total income for nurses was $250 while doctors reported $1,393 (Table 64).

Table 64: Total income from all sources by profession (USD)

Cadre	Median	Min	Max
EHPs	800	210	2,700
Midwives	350	200	2,210
Nurses	250	199	2,640
Doctor	1,393	285	2,500

Total	**258**	**199**	**2,700**

The median total income for cadres in the government sector was $250, while cadres in the municipality received a median of $1,303. In the mission sector cadres received median total income of $246 from all sources. There are significant differences in the total income from all sources received by cadres across sectors

Table 65: Total income from all sources (official salary, allowances, private practice, IGA) by profession and sector (USD)

Sector	**Government**			**Municipality**			**Mission**			
Cadre	**Median**	**Min**	**Max**	**Median**	**Min**	**Max**	**Median**	**Min**	**Max**	***p-value***
EHPs	250	210	420	1,100	258	2,700	232	219	550	0.014
Midwives	256	200	950	1,730	249	2,200	249	200	350	<0.001
Nurses	250	200	2,640	1,000	200	2,203	240	199	1207	<0.001
Doctor	2,500	2,500	2,500	-	-	-	285	285	285	-
Total	**250**	**200**	**2,640**	**1,303**	**200**	**2,700**	**246**	**199**	**1,207**	**<0.001**

Figure 9 shows that EHPs total income in the government sector comprises only of net salary and allowances, reflecting the fact that they are not permitted to engage in locum and private practice. Slightly more than 50% of government nurses' total income comes from private practice while their official net salary makes up only 20% of the average total income. Midwives on the other hand source more than 50% of their average total income from a combination of official net salary plus allowances. We note that the net salary and allowance on average are almost equal. The doctor working in the government sector reported that 80% of his income comes from his private practice while his official net salary makes up only 20% of his total salary.

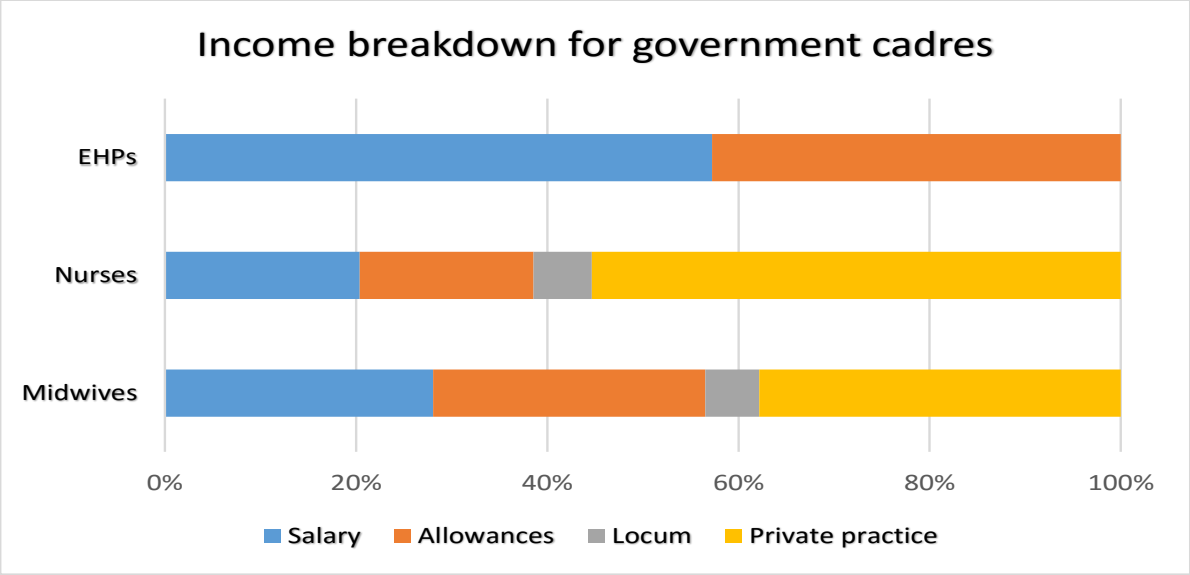

Figure 9: Breakdown of total income for cadres in the government sector

Figure 10 below shows the breakdown of the total income received by cadres in the municipality sector. The average total income comprises of about 75% coming from net salary and about 25% from allowances.

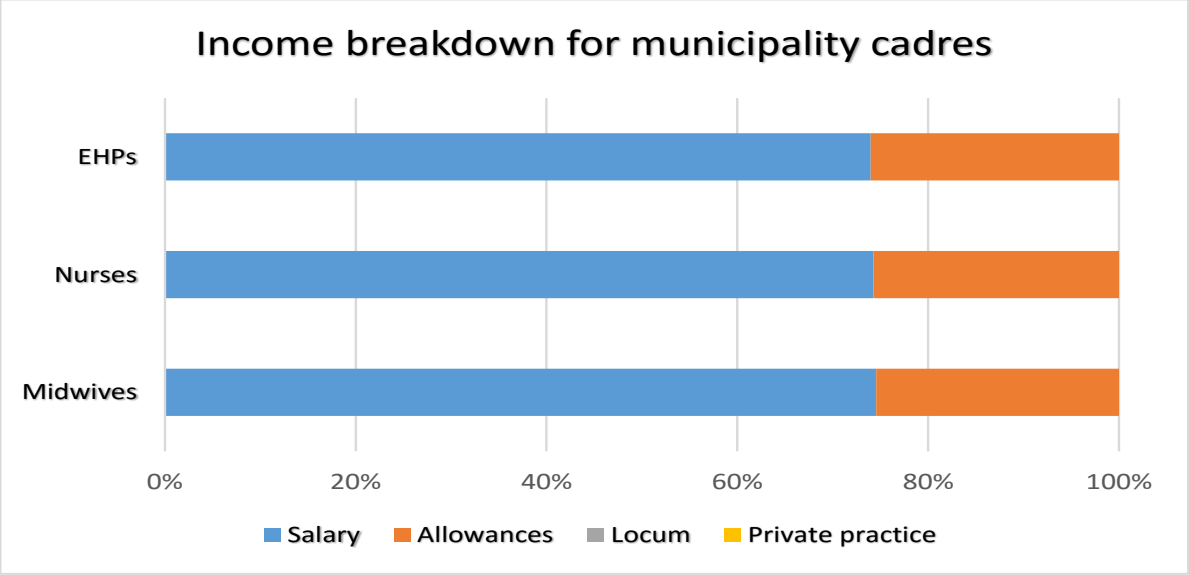

Figure 10: Breakdown of total income for cadres in the municipality sector

Looking at incomes from the mission sector, we find that EHPs' sole source of income is the official net salary. Nurses on the other hand have their official net salary comprising less than 20% of the

average total income and about 45% from private practice. The pattern for midwives in the mission sector is similar to that of midwives in the municipality sector where the average total income sources are the official net salary plus allowances only. The doctor who was interviewed who works for the mission sector reported that 80% of his total income comes from allowances allocated to him, 18% comes from his official net salary and 2% from private practice. His pattern of total income differs from the government doctor mainly because of work experience and ownership of private practice (Figure 11).

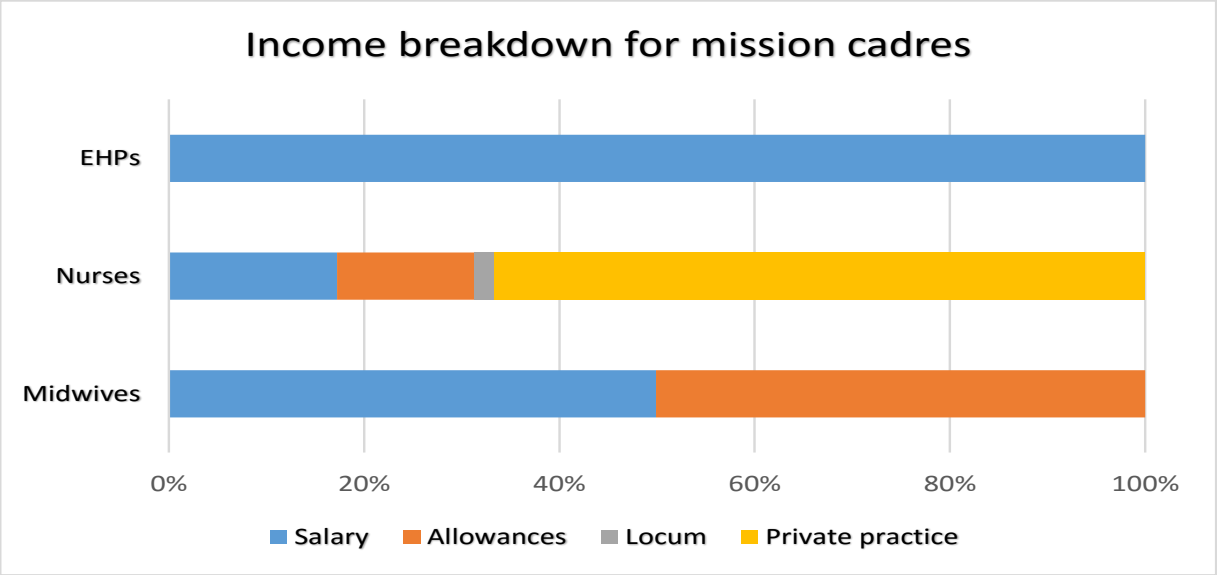

Figure 11: Breakdown of total income for cadres in the mission sector

Cadres in the government sector received a total median hourly rate of $1,57 while those in the municipality sector received $8.13. In the mission sector cadres received $1,40 per hour. There were significant differences in the hourly rates received by cadres across sectors **(**

Table 66**).** The hourly rate was calculated with the assumption that cadres work four weeks in a month. We have however compared cadres of different grades and years of experience.

Table 66: Hourly rate of income by profession and sector (USD)

Sector	Government			Municipality			Mission			
Cadre	**Median**	**Min**	**Max**	**Median**	**Min**	**Max**	**Median**	**Min**	**Max**	***p- value***
EHPs	1,56	1,31	2,63	6,88	1,62	16,88	1,45	1,37	3,06	0.014
Midwives	1,56	1,25	3,03	9,64	1,56	14,10	1,42	0,65	2,19	<0.001
Nurses	1,53	0,83	2,72	5,38	0,60	13,77	1,40	1,04	2,50	<0.001
Doctor	1,33	1,33	1,33	-	-	-	1,11	1,11	1,11	-
Total	**1,57**	**0,83**	**3,03**	**8,13**	**0,60**	**16,88**	**1,40**	**0,65**	**3,06**	<0.001

Hours worked in other income generation activities

The median number of hours worked in other income generating activities was 8 hours for EHPs, 13 for Midwives and 8 hours for Nurses per week, as shown in Table 67.

Table 67: Hours worked in other income generating activities, per week

Cadre	Median	Minimum	Maximum
EHPs	8	1	21
Midwives	13	1	28
Nurses	8	1	28
Doctor	21	21	21
Total	**8**	**1**	**28**

The median hours spent on income generating activities by cadres in the government and mission sectors was 8 hours while in the municipality sector it was 12 hours. However there were no significant differences between sectors as depicted in Table 68

Table 68: Hours worked in other Income generating activities each week by profession and sector

Sector	Government			Municipality			Mission			
Cadre	**Median**	**Min**	**Max**	**Median**	**Min**	**Max**	**Median**	**Min**	**Max**	***p-value***
EHPs	4	1	6	9	2	21	8	8	8	*0.291*
Midwives	8	2	16	14	7	20	14	1	28	*0.639*
Nurses	8	1	24	12	6	28	8	2	14	*0.141*
Doctor	21	21	21	-	-	-	-	-	-	-
Total	**8**	**1**	**24**	**12**	**2**	**28**	**8**	**1**	**28**	***0.075***

There were no significant differences in the number of hours worked in income generating activities by gender.

26 cadres mentioned that there were changes in the number of hours they worked in the past few years. 70% of midwives who mentioned a change in average number of hours worked in the past few years said the number of hours had increased. About 57% of nurses mentioned that the hours they worked in their IG activities had decreased, as shown in Table 69.

Table 69: Changes over the past five years

Cadre	**Decreased n(%)**	**Increased n(%)**	**Total n(%)**
EHP	1(50.0)	1(50.0)	2(100.0)
Midwives	3(30.0)	7(70.0)	10(100.0)
Nurses	8(57.1)	6(42.9)	14(100.0)
Total	**12(46.2)**	**14(53.9)**	**26(100.0)**

7. Motivation and perceptions

Motivating factors

When asked what motivated participants to stay in their jobs, 31% of the respondents mentioned salary, 28% had no better options available elsewhere, 23% cited their passion for their role and 23% mentioned the opportunity to serve the community as illustrated in Figure 12.

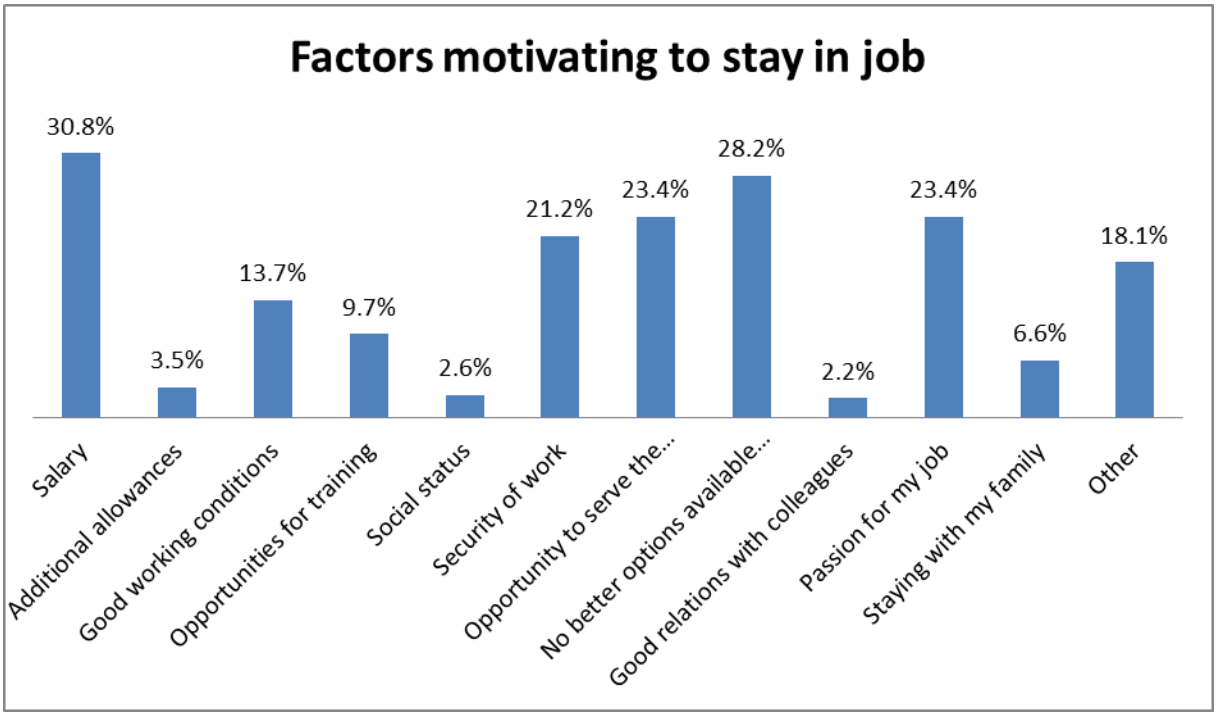

Figure 12: Main factors that motivate to stay in job (N=227)

41% of EHPs mentioned opportunity to serve the community, followed by 35% who mentioned security of work and no better options elsewhere respectively. 37% of midwives indicated that they were mainly motivated by salary/pay, 30% indicated they had no better options available elsewhere and 23% had passion for their job. 27% of nurses indicated that they were mainly motivated by pay/salary. The opportunity to serve the community, no better options available elsewhere and passion had a proportion of 25%. (Table 70)

Table 70: Main motivating factors by profession

Main motivating factors	EHPs n(%)	Midwives n(%)	Nurses n(%)	Doctors n(%)
Salary/pay	4(23.5)	32(37.2)	33(27.0)	1(50.0)
Additional allowances	0(0.0)	5(5.8)	5(4.1)	0(0.0)
Good working conditions	4(23.5)	17(19.8)	10(8.2)	0(0.0)
Opportunities for training	0(0.0)	12(14.0)	10(8.2)	0(0.0)
Social status	0(0.0)	5(5.8)	1(0.8)	2(100.0)
Security of work	6(35.3)	19(22.1)	23(18.9)	0(0.0)
Opportunity to serve the community	7(41.2)	15(17.4)	31(25.4)	0(0.0)
No better options are available elsewhere	6(35.3)	26(30.2)	31(25.4)	0(0.0)
Good relations with colleagues	2(11.8)	1(1.2)	1(0.8)	1(50.0)
Passion for my job	2(11.8)	20(23.3)	31(25.4)	1(50.0)
Staying with my family	4(23.5)	7(8.1)	4(3.3)	1(50.0)
Total (responses, not respondents)	**17(100.0)**	**86(100.0)**	**122(100.0)**	**2(100)**

Ranking of factors (weighted by score given)

The highest ranked motivating factor by profesion and sector was passion for my job, with the average score of 4.7, followed by salary/pay and security of work with 4.5 (Table 71 & 72).

Table 71: Average score of main motivating factors by profession (top six)

	Average scores				
Main motivating factors	**EHPs**	**Midwives**	**Nurses**	**Doctors**	**Average Score**
Passion for my job	3.5	4.8	4.8	-	4.7
Salary/pay	4.5	4.5	4.5	4.0	4.5
Security of work	4.0	4.5	4.6	-	4.5
No better options available elsewhere	4.3	4.1	4.7	5.0	4.4
Good working conditions	3.0	3.8	4.0	-	3.8
Opportunity to serve the community	1.3	0.4	1.5	-	1.0

Table 72: Average score of main motivating factors by sector (top six)

	Average scores			
Main motivating factors	**Government**	**Municipality**	**Mission**	**Average score**
Passion for my job	4.8	4.6	4.9	4.7
Salary/pay	4.8	4.5	4.1	4.5
Security of work	4.6	4.2	4.8	4.5
No better options available elsewhere	4.6	4.0	4.8	4.4
Good working conditions	3.7	3.6	4.1	3.8
Opportunity to serve the community	0.3	1.5	2.5	1.0

There were no significant differences for all the motivating factors by district and by gender

Table 73. Ranking of motivating factors by age (doctors)

	Average scores				
Main motivating factors	**25-34**	**35-44**	**45-54**	**55-64**	**Average Score**
Passion for my job	-	-	-	-	-
Salary/pay-	4	-	-	-	4
Security of work	-	-	-	-	-
No better options available elsewhere	-	5.0	-	-	5.0
Good working conditions	-	-	-	-	-
Opportunity to serve the community	-	-	-	-	-

Midwives in the age range 25-34 cited security of work as the highest motivating factor (5.0). In the age range and 35-44 security of work was ranked 4.6. In the age ranges 45-54 passion for the job was ranked highest at 5.0 and in the 55-64 it was ranked 4.8. Older midwives place value on the job while job security for the younger cadres (Table 74).

Table 74. Ranking of motivating factors by age (midwives)

	Average scores				
Main motivating factors	**25-34**	**35-44**	**45-54**	**55-64**	**Average Score**
Passion for my job	4.6	4.0	5.0	4.8	4.8
Salary/pay	4.8	4.4	4.5	4.3	4.5
Security of work	5.0	4.6	4.1	4.5	4.5
No better options available elsewhere	4.8	4.3	3.9	3.6	4.1
Good working conditions	4.0	4.2	3.8	3.3	3.8
Opportunity to serve the community	4.0	4.3	4.3	4.6	4.4

Nurses in the age range 25-34 value security of work highest at 4.9, closely followed by no better options elsewhere at 4.8. In the 35-44 age range passion for the job was ranked highest at 4.6. Nurses in the age range 45-54 ranked three factors: passion for the job, salary/pay and no better options available elsewhere at 4.8. Finally nurses in the age range 55-64, ranked both passion for the job and no better options elsewhere highest at 4.7 (Table 75).

Table 75. Ranking of factors motivating nurses, by age

	Average scores				
Main motivating factors	**25-34**	**35-44**	**45-54**	**55-64**	**Average Score**
Passion for my job	4.5	4.9	4.8	5	4.7
Salary/pay	4.5	4.1	4.8	4.8	4.5
Security of work	4.9	4.3	4.5	5.0	4.6
No better options available elsewhere	4.8	4.6	4.8	4.5	4.7
Good working conditions	3.5	4.0	4.0	4.5	4.0
Opportunity to serve the community	4.3	4.5	4.3	4	4.4

The highest ranked motivating factor for EHPs in age range 25-34 was no better options at 5.0. In the 35-44 age range opportunity to serve the community was ranked highest at 5.0, EHPs in the age range 45-54 ranked salary/pay highest at 4.5 (Table 76).

Table 76. Ranking of motivating factors by age (EHPs)

	Average scores				
Main motivating factors	**25-34**	**35-44**	**45-54**	**55-64**	**Average Score**
Passion for my job	-	-	3.5	-	3.5
Salary/pay	-	-	4.5	-	4.5
Security of work	-	-	4.0	-	4.0
No better options available elsewhere	5.0	-	4.2	-	4.3
Good working conditions	-	4.0	1.0	-	3.0
Opportunity to serve the community	-	5.0	4.3	-	4.4

How life has changed since the end of the crisis

This was an open ended question where key phrases from the respondent were noted and were thematically analysed. 34% of the respondents mentioned that their workload had increased since the end of the crisis in 2009, while almost 31% said resources were now available at work. 30% of the respondents mentioned that they were now able to pay school fees. 21% mentioned increased salary. (Figure 13)

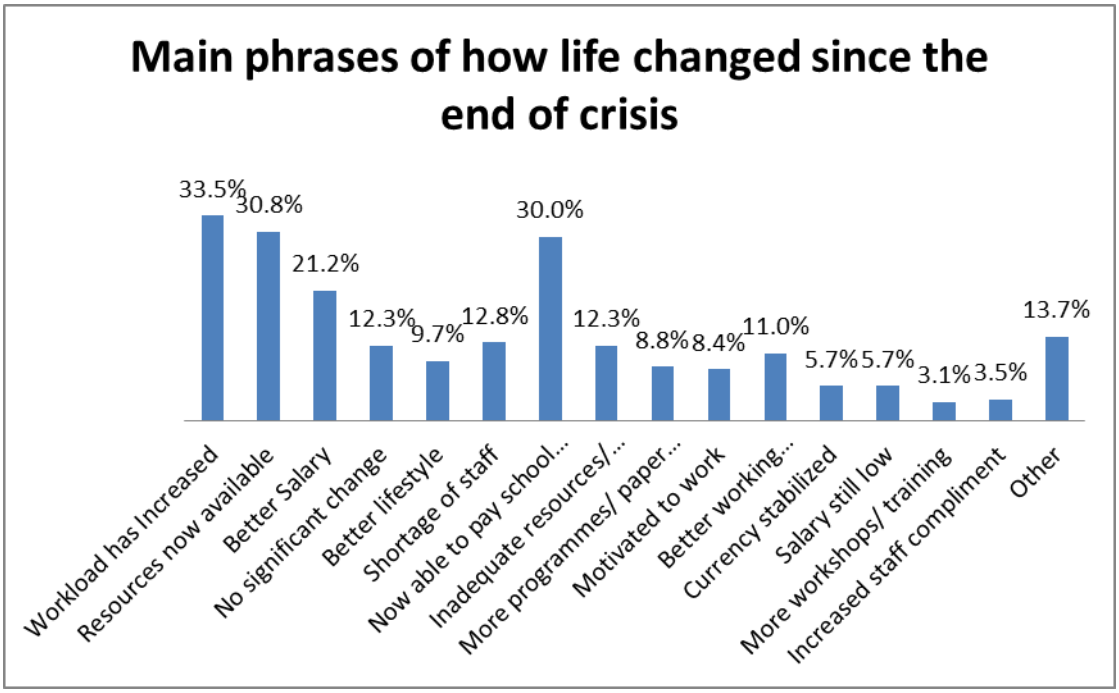

Figure 13: Main phrases of how life changed since the end of crisis

The highest proportion of EHPs mentioned that their working life had changed because resources were now available (31%), had better salary (31%) while the other 5 mentioned that they were now able to pay school fees as well as buying food or property. Of the midwives who said their life had changed since the end of the crisis, 39 said their workload had increased, 26 mentioned better salary, while 22 said they were now able to pay school fees and buy food or property. 44 nurses mentioned that resources were now available at work, 39 said they now able to pay school fees, buy food or property while 36 said their workload had increased. (Table 77)

Table 77: Main phrases of how life changed since the end of crisis by profession

Main phrases of how life changed	EHPs n (%)	Midwives n (%)	Nurses n(%)	Doctors n(%)
Workload has Increased	1(5.9)	39(45.3)	36(29.5)	0(0.0)
Resources now available	5(29.4)	20(23.3)	44(36.1)	1(50.0)
Better salary	5(29.4)	26(30.2)	17(13.9)	0(0.0)
Better life style	2(11.8)	8(9.3)	12(9.8)	0(0.0)
Shortage of staff	1(5.9)	13(15.1)	15(12.3)	0(0.0)

Now able to pay school fees, buy food or property	5(29.4)	22(25.6)	39(32.0)	2(100.0)
Shortage of resources	1(5.9)	7(8.1)	20(16.4)	0(0.0)
More programmes	0(0.0)	13(15.1)	7(5.7)	0(0.0)
Motivated to work harder	2(11.8)	5(5.8)	12(9.8)	0(0.0)
Better working conditions	5(29.4)	7(8.1)	12(9.8)	1(50.0)
Currency stabilised	4(23.5)	1(1.2)	8(6.6)	0(0.0)
Salary still low	0(0.0)	6(7.0)	7(5.7)	0(0.0)
More workshops/ training	1(5.9)	1(1.2)	5(4.1)	0(0.0)
Increased staff complement	1(5.9)	4(4.7)	3(2.5)	0(0.0)
Total (responses, not respondents)	**17(100.0)**	**86(100.0)**	**122(100.0)**	**2(100.0)**

The highest proportion of cadres in the government sector mentioned that their working life had changed because resources were now available (37%), workload had increased (30%) and there were shortages of resources (26%). Cadres in the municipality sector said their life had changed since the end of the crisis, with 41% mentioning that their workload had increased, 39% mentioned that they were now able to pay school fees and buy food or property and 29% mentioned that resources were now available at work. In the mission sector 26% said their workload had increased while 24% mentioned that resources were now available and another 24% mentioned that they were now able to pay school fees and buy food or property (Table 78).

Table 78: Main phrases of how life changed since the end of crisis by sector.

Main phrases of how life changed	**Government n (%)**	**Municipality n (%)**	**Mission n (%)**
Workload has Increased	26(30.2)	37(41.1)	13(25.5)
Resources now available	32(37.2)	26(28.9)	12(23.5)
Better salary	16(18.6)	29(23.2)	3(5.9)
Better life style	4(4.7)	11(12.2)	7(13.7)
Shortage of staff	15(17.4)	12(13.3)	2(3.9)
Now able to pay school fees, buy food or property	21(24.4)	35(38.9)	12(23.5)

Shortage of resources	23(26.7)	2(2.2)	3(5.9)
More programmes	1(1.2)	18(20.0)	1(2.0)
Motivated to work harder	4(4.7)	9(10.0)	6(11.8)
Better working conditions	11(12.8)	11(12.2)	3(5.9)
Currency stabilised	5(5.8)	6(6.7)	2(3.9)
Salary still low	10(11.6)	2(2.2)	1(2.0)
More workshops/ training	3(3.5)	4(4.4)	0(0.0)
Increased staff complement	4(4.7)	3(3.3)	1(2.0)
Total (responses, not respondents)	**86(100.0)**	**90(100.0)**	**51(100.0)**

There were significant differences between cadres across districts who mentioned workload increase and between males and females who mentioned better working conditions. However for all other views on how life had changed since the end of the crisis by district and gender there were no significant differences.

What would motivate cadres to serve in rural areas?

This was an open ended question where key phrases from the respondent were noted and were thematically analysed. 50% of the cadres mentioned accommodation as an important factor which motivates them to work in rural areas while 31% mentioned transport and good roads. 28% said electricity and 23% mentioned water. 20% mentioned rural allowance as an important factor which would motivate them to work in rural areas as depicted in Figure 14.

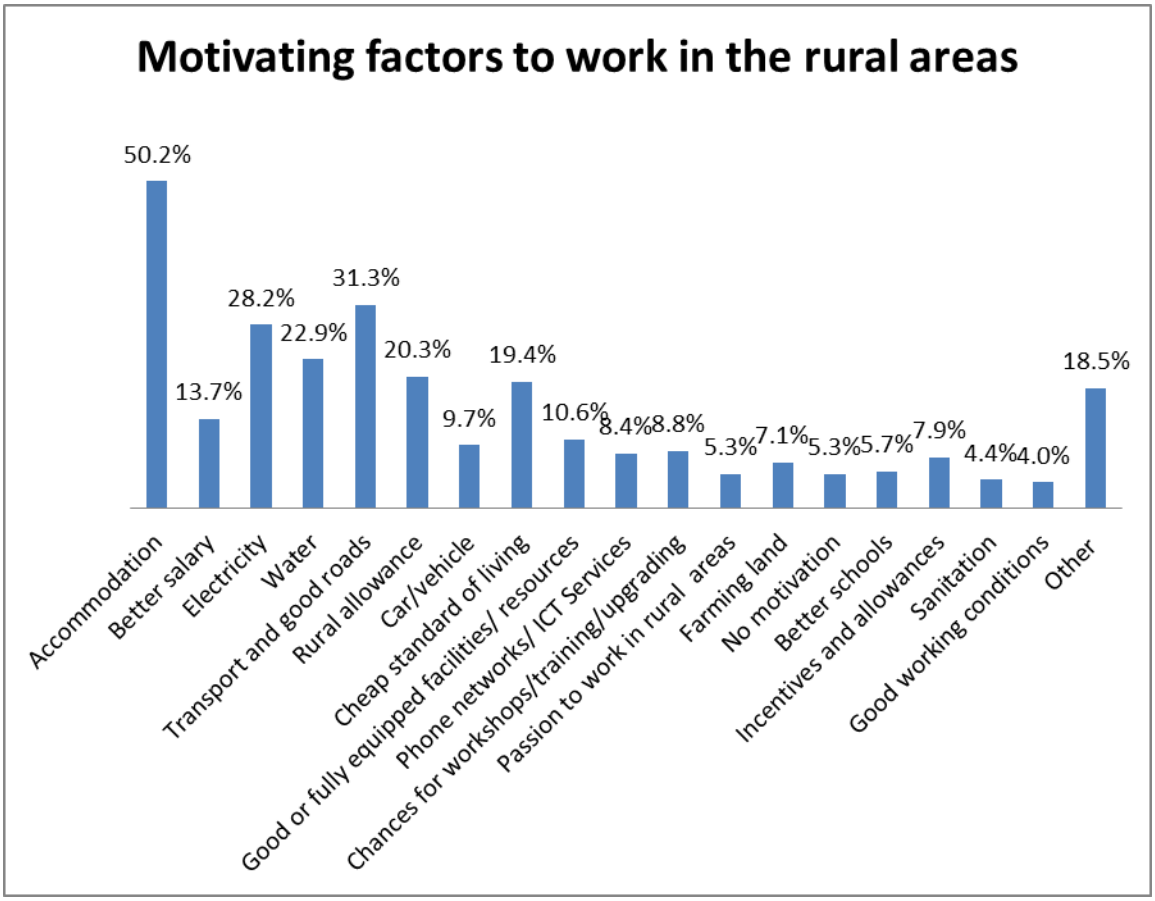

Figure 14: Main phrases as to what would motivate them to serve in rural areas

Significantly more females expressed that the motivating factor for them to work in rural areas was the passion to work in those areas.

There were significant differences between cadres who mentioned accommodation, better salary, better schools for children and passion to work in rural areas (Table 79).

Table 79: Main phrases as to what motivates them to serve in rural areas by profession

Main phrases of what motivates to serve in rural areas	EHPs n (%)	Midwives n (%)	Nurses n (%)	Doctors n (%)
Accommodation	6(35.3)	52(60.5)	56(45.9)	0(0.0)
Better salary	4(23.5)	17(19.8)	9(7.4)	1(50.0)
Electricity	4(23.5)	26(30.2)	33(27.1)	1(50.0)

Safe water	5(29.4)	20(23.3)	26(21.3)	1(50.0)
Good roads	5(29.4)	29(33.7)	37(30.3)	0(0.0)
Rural allowance	2(11.8)	19(22.1)	25(20.5)	0(0.0)
Vehicle	1(5.9)	15(17.4)	6(4.9)	0(0.0)
Cheap living standards	1(5.9)	12(14.0)	30(24.6)	1(50.0)
Fully equipped facility	0(0.0)	8(9.3)	16(13.1)	0(0.0)
ICT services	1(5.9)	8(9.3)	10(8.2)	0(0.0)
Passion to work in rural areas	4(23.5)	6(7.0)	9(7.4)	1(50.0)
Chances for workshops	0(0.0)	6(7.0)	6(4.9)	0(0.0)
Farming land	0(0.0)	2(2.3)	14(11.5)	0(0.0)
No motivation	2(11.8)	5(5.8)	5(4.1)	0(0.0)
Better schools	0(0.0)	10(11.6)	3(2.5)	0(0.0)
Increased incentives	1(5.9)	10(11.6)	7(5.7)	0(0.0)
Good sanitation	1(5.9)	5(5.8)	4(3.3)	0(0.0)
Good working conditions	1(5.9)	3(3.5)	5(4.1)	0(0.0)

Significantly more cadres in urban areas expressed that better salaries, electricity, good roads and a vehicle would motivate them to work in rural areas. While significantly more cadres in rural areas expressed that the cheap standard of living motivates them to work in rural areas (Table 80**Error! Reference source not found.**).

Table 80: Main phrases as to what would motivate them to serve in rural areas by profession and current location (rural/urban)

Main phrases as to what would motivate to work in rural areas	**Rural n (%)**	**Urban n (%)**
Accommodation	72(27.9)	42(31.6)
Electricity	49(19.0)	15(11.3)
Water	37(14.3)	15(11.3)
Transport and good roads	50(19.4)	21(15.8)
Rural allowance	32(12.4)	14(10.5)

Cheap standard of living	18(7.0)	26(19.5)
Total (responses, not respondents)	**258(100.0)**	**133(100.0)**

Discussion

The health worker incentives survey (HWIS) collected data from a sample of HRH working in three districts. Health worker characteristics, years of experience, finances, ownership of household assets, current employment, workloads, training, salary and allowances, benefits in kind, motivation to work, and views about changes in their lives after the crisis and willingness to work in rural areas have been described. The vacancy rates of December 2007 influenced our decision to focus on nurses, midwives, EHPs and doctors. HSB returns for HRH provincial data were used to calculate sample proportions for the survey. The survey focused on the period 2000-2007 considered to be the height of the crisis (HSB 2012).

The gender distribution of health workers in the districts adds currency to the view that the nursing profession is a female domain. Medical officers and EHPs were mostly male confirming the general view that these professions are masculine. This is consistent with other countries in the region. All health workers who participated were Zimbabwean, an indication that an initiative to recruit health workers from the sub-region and internationally, adopted at the onset of the crisis was not successful. (HSB 2012).

Experience is an important attribute for HRH in the health sector and such experienced health workers are a strategic asset in the development of the health system into the future. More experienced workers are more apt to leave for greener pastures when conditions deteriorate . The brain drain in th health sector followed the typical trajectory where the most experienced health cadres left to join other providers locally , regionally and in the diaspora (, GoZ, 1999, Chimbari et al, 2008, Chikanda, 2010, HSB, 2010[b], 2010[c],Mackinon et al 2012). In the first decade of independence Zimbabwe's health system was rated as the best in the region (GoZ, 2009) and health workers did not want to leave the public health sector because of its prestige and the guarantee of good end of service benefits . Moving to other sectors would affect the gratuity of these experienced cadres as no gratuity is paid on resignation (Chirwa, 2016a). Generally retention of health workers was better before the crisis

primarily because the government had effective systems of providing short term and longterm incentives. Training opportunities and promotion were important for retention before the crisis. Good and transparent implementation of the manpower development guidelines which require that eligibility for post basic training for nurses and any further training for EHPs and doctors be determined by years of experience were critical for retention (MoHCW, 2003: 7). Once one attained the post basic training in midwifery it meant that one was eligible for a managerial position and hence this meant that nurse mobility was high as they moved to the midwifery grade after post basic training. This changed during the crisis and affected health worker confidence leading to the brain drain.

It has been observed that working in one's home area reduces living costs and increases opportunities for additional income from agricultural activities for rural based health workers (Chirwa 2016a, 2016b). Most health workers were working out of their home district and this is a disincentive in depressed economic situations as additional costs for transport are incurred when such health workers visit their homes . Supporting health workers to get opportunities to work in their home area in resource constrained situations helps provide critical health staff in hard to reach areas. At the peak of the crisis health workers requested transfers to facilities where they could work from their homes and the main reason they cited were reductions in costs, especially the travelling costs (Chirwa 2016[a], 2016[b]).

Midwives were more in number, in the municipality, occupying general nursing positions, from which they earned more than they would earn in midwife positions in government employment. Skill utilisation therefore is not optimal, resulting in task shifting in the public health sector to provide services even in cases where referral would be the most appropriate intervention due to a variety of challenges related to transfer of cases. Wheeler (2010) contends that:

> *"[municipalities] recruit midwives from MOHCW (usually senior nurses with an additional qualification) for service in their clinics, thereby denuding government hospitals, while at the same time then referring all complicated obstetric cases to those same hospitals that now lack the qualified midwives to manage the complications*"

The rural areas are worst affected by the lack of qualified midwives. The question of skill utilisation requires long tem workforce planning because ignoring the current asymmetries in health worker

distribution leads to underutilization of the health workforce and makes health services expensive for the poorest populations(Sitter et al, 2011).

In district 1 and 2, interviews were conducted at a central hospital (quaternary level) and a provincial hospital (tertiary level) respectively. There were 21 nurses in district 1 and 12 in district 2 with post basic training in midwifery respectively. Mission hospitals also had a fair number of midwives (9 midwives in district 2 and 7 in district 3) mostly because the majority of facilities sampled for the study were designated district hospitals (secondary level) and hence supply of midwives through recruitment as well as better opportunities for general nurses at the institutions to enrol for post-basic training in midwifery were prioritised. However this preferential enrolment for post-basic training targeted the nurses at the designated district mission hospitals, but not other nurses at mission hospitals in general, thus creating a pull factor to district hospitals (Chirwa, 2016a).

The distribution of HRH across the study districts shows that the nurses and midwives constitute the biggest category of HRH. The provincial per capita estimates of 2012 for district 1 was 18 per capita nurses per 10,000 population, and 6 midwives per capita per 1000 population. District 1 is urban hence the overall better staffing situation (World Bank Group, 2016). The distribution across districts is uneven , with the rural district having less qualified health staff as is the norm in low income countries.

In the 2012 estimates per capita midwives and nurses per 10,000 population were 2.0 and 8.0 respectively in the province in which district 2 and 3 are located (World Bank Group, 2015). When we disaggregate distribution by sector, acute uneven distribution becomes apparent. The highest number of midwives were in the in the urban areas than in rural areas and this is against a background of higher births occurring in the rural than urban areas. This distribution masks grave inequities in availability of expert maternal and child care services in all districts. There are more midwives at municipal primary health care centres who refer complicated cases to the quaternary level where midwives are fewer and with less experience. (McPake et al., 2013; Chirwa, 2016a; Chirwa, 2016b).

This distribution reflects the kind of inequities that the health sector has to contend with, not only in terms of providing equitable maternal and child care services, but also in ensuring that health workers provide care that is within their scope of knowledge and skills. The distribution is far from the acceptable density as recommended by the WHO (HSB, 2012). In the open ended questions, rural

based midwives mentioned that one of the things that would motivate them in their work would be the availability of proper facilities, increased staff, and good working conditions including electricity and accommodation. The rural areas are home to the majority of the people yet the distribution of health workers reflects an urban bias and this is one reason why there is poor performance in health indicators like child and maternal mortality in these areas (Zimbabwe Demographic Health Survey (ZDHS), 2011). The results based financing (RBF) and Health Transition Fund (HTF) are providing additional financial and non-financial incentives to reduce infant and maternal mortality in targeted rural facilities (MoHCW, 2011 Madhekeni, 2012).

The mission sector has retained midwives because before the crisis, the mission sector had good incentives, good schools, doctors and resources, usually provided by international fraternal church organisations. This support has declined significantly in the post crisis era resulting in poor staffing levels for doctors. The foreign doctors supported by fraternal church hospitals were a critical factor and improved working conditions for nurses and midwives who could refer complicated cases. This historical legacy has helped retain senior midwives who now prefer to reach pensionable age in their current posts despite the decline in conditions and terms.

Dollarization adversely affected the end of service benefits of mission sector health workers, as they have had to start afresh the pension contributions in the post crisis dollarized financial regime. The pension contributions for the pre-crisis period have been commuted into United States dollars and this process has disaffected health workers who view the commuted amounts as unfair and not reflective of the contributions made over many years of service (Chirwa, 2016b).

There was no significant difference in the number of years EHPs had worked in the three sectors. EHPs stayed in their jobs across the sectors. 76% of EHPs were in the age range 45-54 suggesting a high retention in all sectors. The highest ranked motivating factor for EHPs staying in their jobs was passion, with an average score of 4.7, followed by salary/pay and security of work, both with an average score of 4.5, and lastly security of work at 4.4 based on a Likert scale of 5 (highest) to 1 (lowest). Cadre and age are important factors for motivation. Among the younger EHP cadres in the age range 25 to 34, security of work is a prominent factor for motivation while among doctors in the same age range salary/pay is very important. EHPs in the 25-34 age range cite no better options elsewhere as the reason to stay in their jobs. Motivation is generally low among young and middle aged cadres as they

rank no better options elsewhere higher, suggesting that the likelihood of these cadres leaving as soon as an option avails itself is high indeed. However nurses seem to rank highest, no better options elsewhere and passion for the job with an average score of 4.7. The findings may indicate that the crisis has led to changes in the factors that motivate health workers, though there may also be an element of changes over the life-cyle.

The midwives working for the government in the three districts are concentrated at quaternary (20 at central hospital), tertiary levels of care (10 provincial hospital). Two designate district hospitals were part of the study sites but were also mission hospitals and the midwives had experience of a maximum of 33 years which was the lowest among the three providers. Thirty seven percent of the nurses were in the age range 25-34. The maximum number of years they had worked in the health sector was 32, 42 and 41 years in the government, municipality and mission sectors respectively. The municipality providers have the most experienced nurses and midwives and if experience presupposes better skills and performance, health service delivery in municipal facilities is in that regard better than in the public and mission sectors. The more youthful nurses were in the government sector. The proportion of cadres who had moved from government to other sectors were 65% for EHPs, 45% for midwives and 30% for general nurses. The destination for most of the cadres were the municipality sector. Wheeler (2010) confirms this trend in his assessment of the internal migration of health workers. The NIHFA confirms that the proportion of the population of women of reproductive age vis a vis midwives is higher in rural districts which have fewer higher level facilities and hence less skilled cadres at the largely primary level facilities(MoCHW, 2012). In its overview, the HRH Health Strategy for 2010-2014, a post-crisis plan to revitalise the health sector, states that initial successful local production of a high quality work force is critical as Zimbabwe's health delivery system has over the past few years been hampered by a massive internal and external brain and skills drain (MoHCW & HSB, 2010, HSB 2010b, HSB, 2010c. This has resulted in the loss of experienced qualified health professionals from the public health sector. There is an internal labour market which has led to distortions in the distribution of skills in the health delivery sector with more midwives being concentrated in the quaternary, tertiary and secondary level facilities located in urban areas. The survey shows that in urban areas the PHC facilities in the municipalities have a disproportionately high number of midwives, who are probably doing the mundane aspects of maternal health and newborn health. The HSB in its annual report acknowledges that there is no specific post for midwives in the staff establishment. Midwives are appointed in general nursing positions. This creates distortions as midwives apply to join the lower

level facilities which are predominantly in the urban areas and in the better paying municipal sector leaving serious gaps in underserved rural areas and sub optimal utilisation of skills (MoHCW& HSB, 2010, HSB 2010a, Wheeler, 2010).

Findings confirm a high concentration of youthful nurses in the 24-34 age group). Gupta and Dal Poz's (2009) six country surveys, found that Zimbabwe had the youngest facility-based workforce with almost a quarter of the health workers who participated being under 30 years, which reflects a huge deficit in experience in the public sector. There were 27 nurses out of 51 who had between 0-10 years' experience in the government health sector, 19 out of 31 in the mission sector and 18 out of 30 in the municipality sector. This low number of experienced nurses in the municipality is confounded by the inclusion of the RDC which had a youthful workforce. Although RDCs fall under the local government ministry, the RDCs' health workers are remunerated solely by government. This contrasts with urban municipalities who are able to top up health worker salaries from the numerous revenue sources available to them (Chirwa2016[a], 2016[b]). A number of nurses who participated in the survey in the more remote rural areas were junior and recent graduates of the Primary Care Nurse (PCN) programme introduced in 2005, and initially trained for 18 months, to mitigate the inexorable migration of nurses from the rural health facilities (MoHCW, 2007; MoHCW & HSB, 2010; Wheeler, 2010). The initiative ensured that at least a trained nurse cadre could be deployed at a health facility in the rural areas at the peak of the crisis.

The salaries for all cadres was highest in the municipality with median salaries of $1,100 for EHPs, $1,730 for midwives, $1,000 nurses. Ninety two percent of nurses, 91 % of EHPs and 74% of midwives in the municipality reported that salaries were regular. The in-depth and key informant interviews indicated that salaries were being paid late because of cash flow problems that date back to the adoption of the dollar as official currency (Chirwa, 2016[a]; 2016[b]).

The median salary for the government doctor was $500 while the median salary for the mission doctor was $285. Both salaries were reported to be regular. There were significant differences in the salaries received by cadres across all sectors. The salaries in the government sector are not adequate as more than half (52%) of cadres had borrowed money compared to 39% in the municipality. The mission sector closely follows the government with 47% of cadres reporting having borrowed some money in the month preceding the survey. The trend in borrowing broadly follows income patterns across

sectors and districts. Very few cadres from across the sectors managed to save any money in the month preceding the survey. Several reasons account for the lack of savings which include low salaries, especially for the government, mission and RDC sectors. However there is also the aspect of loss of confidence in the financial services, which are considered to be risky following the loss of savings and erosion of pensions during the crisis.

The total median income for all cadres in the government, municipality and mission sectors was $250, $1,303 and $246 respectively, and the difference in total income was significant.
Private practice was not common as only 12 cadres out of 210 reported doing some private practice. One doctor, 6 nurses and 5 midwives reported that they did some private practice. The median income from private practice for midwives was $200 and $438 for nurses.

The additional income or incentives paid across sectors differs, with the municipality paying more allowances than the other sectors. The common retention allowances across the sectors were for harmonised retention, uniform, housing and transport. There were allowances that were paid to municipal health workers but not paid to government, mission and RDC sectors. These included water, locomotion, elderly, personal to holder and professional allowances. Water allowance is a benefit that entails paying subsidised rates for municipal water for domestic use. Locomotion allowance is a financial reimbursement for the use of a personal vehicle to conduct official duties. This is usually is paid to municipal health managers and EHPs who have to conduct inspections of facilities, do support visits, and monitor cemeteries and crematoria in the municipal precincts. The elderly allowance is paid to cadres aged 60+ and is a form of pre-end of service gratuity. The personal to holder allowance is paid to those health workers that remained working in the municipality during the crisis and cadres joining the municipality post-crisis are not eligible. The professional allowance is a retention allowance to retain all health workers. All these allowances are calculated as a percentage of the official salary (Chirwa 2016a; 2016b)

Allowances paid to government, mission and RDCs but not paid to municipal health worker were rural area allowance (RAA), locum and on call. RAA is paid to cadres working in rural areas and calculated as a percentage of net salary. Not all cadres in the three sectors are paid these allowances as they are geographical and task-related. The median RAA received by EHPs was $13 while midwives received $13. The median RAA for nurses was $12 while the median RAA for doctors was $60. There are 29

health care cadres who did not know the amount of RAA they received and 149 cadres did not receive RAA as they were working in urban areas in district 1 and 2. The variations in amounts paid for RAA by profession and gender merely reflect the differential grades and seniority of health workers.

Some health workers working in rural areas face challenges in getting opportunities for locum work. This explains the disparity between medians amount of locum between government and the mission sector. The median amount received for locum in government was $450 compared to $30 in the mission sector. Mission hospitals are predominantly in rural areas and facilities are far between making it uneconomic for eligible midwives and nurses to do locum work. On call allowances may take time to be paid. Instances of on call allowances being commuted to leave days are common in rural settings because the government is unable to pay for the extra hours (Chirwa 2016a). The municipality policy categorically states that no health worker is allowed to do locum work. There is no on call duties as most health facilities provide PHC services and open for 12 hours per day. Only the poly-clinics, providing maternity services, open for the whole day seven days a week. If complicated, cases are referred to central hospitals or private hospitals (Chirwa 2016a).

The regularity of payment of the retention allowances was analyzed and the results show that regularity differed by cadre with more nurses (61%) reporting having received the retention allowances irregularly compared to midwives (57,5%) reporting that they received the retention allowance regularly. This was not analyzed by sector. Reported irregularity in the disbursement of the harmonized retention allowance could be a result of the accounting process which requires that retention allowances be paid after reconciliation of the log sheets, which could take time leading to delays. In addition, the fact that more nurses reported irregular payment of the retention allowance could be to do with the fact that there are more nurses who work in the more remote rural areas and hence monthly staff returns may take longer to reach the district offices for accounting purposes, leading to further delays (HSB 2012).

When additional income from allowances is compared with official salaries for nurses and midwives, a disproportionate relationship of salary and allowances is apparent in government, mission and RDC sectors. The additional financial income as a percentage of median monthly salary for midwives was 131%, 29% and 85% for government, municipality and mission sector respectively. For nurses

additional financial income as a percentage of median monthly salary was 106%, 94% and 28% for government, municipality and mission sector respectively. The high percentages of additional income as a percentage of median salary in the government and mission sectors reflect the nature of the harmonized retention allowance which basically involves topping up salaries by hundred percent on a phased reduction model of 25% annually. In the three sectors government, mission and RDC the percentage compliment of total income comprises almost 50% allowances for all cadres while in the municipality only 20% of income is derived from allowances. Health workers in the government, mission and RDC are unhappy with this situation arguing that allowances do not improve their end of service benefits (Chirwa, 2016a).

Our findings on expenditure on food and non-food items show that income differentials shape expenditure patterns of cadres. The median expenditure on food across all the cadres was $200 and across districts. The median expenditure on food as a percentage of the total monthly expenditure was highest for nurses, followed by midwives and the EHPs with no significant differences between male and female cadres.

There was no significant difference in engagement in extra work to bolster incomes among health workers across the sectors, districts and by gender. The data showed that midwives worked more hours per week (median 13hrs) doing extra income generating activities, than nurses and EHPs (median 8 hrs). This is related to the regulations on locum which entail that only senior health workers can engage in locum work. Usually this favours nurses and midwives working at big central, provincial and district hospitals with many departments. The regulations on locum stipulate that cadres who do locum at the institution that they are working at should be redeployed to a different department and for those working at smaller institutions with fewer departments, locum has to be done at a different facility. This introduces further costs for example transport and accommodation, which makes cadres often forego the locum. EHPs are not allowed any additional private practice of any form, hence the low median hours of extra income generating activities.

When disaggregated by sector, we find that health workers in the municipality had a higher median number of hours (12hrs) doing income generating activities than government and mission health workers with a median of 8. This questions the utility of increasing income as a mechanism of motivating workers as such logic leads to the assumption that more of the extra income generating

work would have been found in the government, mission and RDC sectors where incomes are lower. The increases in salaries were viewed as insignificant by health workers in government, mission and RDC sectors.

No user fees were being used to bolster HRH salaries across all providers. The user fees were being collected and retained at the facility in the government and mission sector. The user fees constitute what is known as the health service fund and is to procure essential inputs for the facility (GoZ 2004). In the municipality all user fees are part of the revenue collection and are managed by the municipality finance department.

Training is important for health workers as it determines career progression. In the Zimbabwean context, training for nurses and midwives is regulated by the Zimbabwe Nurses Association (ZINA). ZINA ensures that the curriculum for both pre- service and post basic training complies with acceptable standards. Pre- service and midwifery training are mostly funded by government. Almost 42% of the participants had received MoHCW funding post basic training, with 7% receiving donor funding post-basic training. The midwifery graduates return to the facilities where they were enrolled from, for post-basic training and serve for a period equivalent to the duration of training, before they can be allowed to transfer, if they so wish. Additional training in the form of short courses, seminars and in-service/in-house training are provided to equip nurses and midwives with the current trends in service delivery (Mapanga& Mapanga 2000). There is an emphasis on post-basic training and short term courses in the health sector primarily to bridge the skills and experience gap among cadres working in rural areas. There is also a significant difference in the intensity of training received among cadres. The proportion of midwives who received training was highest (95%), followed by EHPs (88%) and finally nurses (76%). A sector by sector comparison of training shows that the municipality had the highest proportion of health workers who were trained (91%), followed by government (86%) and the mission sector with the least (71%). Health workers expectations for training differ significantly across the sectors. A higher proportion of nurses in government expected to get training because in government there are higher chances for one to train and get support from the human resources development fund. Most of the midwives indicated that they had receieved support for their training while working in the public sector and then moved on after serving the mandatory bonding period. .

Across the sectors, the main benefit of training cited by participants was gaining greater knowledge followed by gaining skills and ability, enhanced professional reputation/status and gaining more confidence in their work. In terms of importance of the benefits of training, greater knowledge was ranked highest, ,followed by skills and ability and enhanced professional reputation/status. The three most important benefits of training do not include better salary, which suggests that commitment to work and high performance are primary concerns for health workers.

Conclusions

The survey provided insights into the post-crisis incentive environment for key HRH cadres, HRH characteristics and the factors which motivate and demotivate them in three districts and three sectors. The study also looked at livelihoods. The findings of the survey are triangulated with findings from two other tools: the in-depth career history and key informant interviews, which are presented as separate reports.

The findings confirm that the health sector is very gendered with the medical and environmental health professions being male dominated and the nurse and midwifery professions female dominated. The survey also showed that the youngest nursing cadres were in the government and mission sector and mainly working in rural areas. The survey established that salary and pay are critical determinants of motivation for all the four cadres that were part of the study doctors, nurses, midwives and EHPs. Age affects perceptions on factors that motivate cadres with older nurses and midwives identifying passion and salary as both important factors that motivate them to stay in their jobs while younger cadres especially nurses are motivated by salary and security of the job. For all cadres, staying in the job because of no better options was a common factor which suggests high level of demotivation and this was across all the age groups and predominantly in the government and mission sector. This indicates that the post crisis efforts at stabilising the workforce through the various incentives has not been fully effective.

Findings show that municipalities attract more experienced HRH into their facilities whom they are able to retain. The health workers in the municipality were older, had post-basic training and yet were hired in positions for general nurses because of superior benefits in the form of high salaries and several allowances. The mission sector and RDCs also had senior health workers who stayed on

because of different factors the main one being to protect their end of service benefits. Most of the health workers in the rural areas also stay there because it is their home area. Working in one's home area helps retain health workers as it has economic benefits of saving on transport and living with one's family and having to maintain one home. The health workforce in the government, mission and RDC sectors are demotivated by poor salaries and lack of opportunities to do private practice. The complement of allowances to their total income is almost half which is not included in the contribution to their pension. This contrasts markedly with the municipality where allowances contribute about 20% to total income and this means their pension contributions and that of the employer are quite high and will ensure a good retirement package.

The survey confirmed that migration of health workers from the public sector occurs. A substantial number of health workers had initially worked in the government sector before they moved to the municipality and mission sectors. The fact that most health workers desire to join the municipality means that the rural areas will be short of experienced and skilled health workers at all times. This is a real challenge that needs to be addressed to resolve maldistribution of available skills.

References

Campbell, J., Dussault, G., Buchan, J. et al. (2014) A universal truth: No health without a workforce. Forum report, Third Global Forum on Human Resources for Health, Recife, Brazil. Geneva,; 370: 950-957.

Chikanda, A. (2010) Medical Leave: The Exodus of Health Professionals from Zimbabwe. (in Crush, J. and Tevera, D. eds ***Zimbabwe's Exodus:*** *Crisis, Migration, Survival*) Southern African Migration Project: Cape Town.

Chimbari, M. J., Madhina, D., Nyamangara, F., Mtandwa, H. and Damba, V. (2008) Retention incentives for health workers in Zimbabwe. *EQUINET Discussion Paper 65*. EQUINET: Harare; www.equinetafrica.com.

Chirwa, Y. et al. (2014) Understanding health worker incentives in post-crisis settings: policies to attract and retain health workers in rural areas in Zimbabwe since 1997, A document review; *https://rebuildconsortium.com/resources/research-reports/understanding-health-worker-incentives-in-post-crisis-settings-a-document-review-of-zimbabwe/*

Chirwa, Y. et al. (2016a) Understanding health worker incentives in post-crisis settings: policies to attract and retain health workers in Zimbabwe: Key informant interviews report; *https://rebuildconsortium.com/resources/research-reports/understanding-health-worker-incentives-in-post-crisis-settings-policies-to-attract-and-retain-public-health-workers-in-zimbabwe-kii-report/*

Chirwa, Y. et al. (2016b) Understanding health worker incentives in three districts of Zimbabwe: IDI report; *https://rebuildconsortium.com/media/1284/zim-idi-final-preformat-draft-nh.pdf*

Crisp, N. and Chen, L. (2014) Global supply of health professionals. *The New England Journal of Medicine 2014; 370:2246-2248*.

Dieleman, M., Watson, M., Sisimayi, C. and CCORE (2012) Impact Assessment of the Zimbabwe Health Worker Retention Scheme Final Report, DFID Human Development Resource Centre 295358.

GoZ (1999) Zimbabwe: *Presidential Review Commission into the Health Sector 1999* Harare: GoZ.

MoCHW (2003) *Manpower Development Plan: Improving the Development of Human Resources for Health Harare*: GoZ.

GoZ (2004) Health Service Act of 2004 (Chapter 15:16) Harare: GoZ.

GoZ (2009) Short Term Recovery Programme: *Getting Zimbabwe Moving again* Harare: GoZ.

GoZ (2010) Medium Term Plan 2010–2015: *Towards Sustainable Inclusive Growth human cantered Development, Transformation and Poverty Reduction* Harare: GoZ.

Gupta, N., and Dal Poz, M. (2009) Assessment of Human Resources for Health Using Cross-National Comparison of Facility Surveys in Six Countries. *Human Resources for Health* 2009*,* **7**(22): 1-9.

HSB (2010a) *Health Service Board Annual Report 2010* Harare: HSB.

HSB (2010b) *Health Service Board Strategic Plan 2011-2014* Harare: HSB.

HSB (2010c) *HSB Human Resources Retention Policy 2010* Harare: HSB.

HSB (2012) *Health Service Board Annual Report 2011* Harare.

Initiatives Inc. (1998) *Ministry of Health and Child Welfare Report of the Motivational Survey: Volume 1*. Initiatives Inc.: Boston.

MacKinon, J. and MacLaren, B. (2012) *Human Resources for Health challenges in fragile states: Evidence from Sierra Leone, South Sudan and Zimbabwe* North-South Institute.

Madhekeni, A. (2012) Implementing Results-Based Management Systems in Zimbabwe: Context and Implications for the Public Sector *(International Journal of Humanities and Social Science Vol. 2 No. 8) [Special Issue – April 2012]* 122.

Mapanga, K. G. and Mapanga, M.B. (2000) A Perspective Of Nursing In Zimbabwe*(OJIN)* May 2000.

McPake, B., Witter, S., Ensor, T., Fustukian, S., Newlands, D., Martineau, T., Chirwa, Y. 2013 Removing financial barriers to access reproductive, maternal and newborn health services: the challenges and policy implications for human resources for health *Human Resources for Health*

MOHCW (1997a) *Health Human Resource master plan*. MOHCW, Harare: Government of Zimbabwe.

MoHCW (1997b) Zimbabwe: *National Health Strategy 1997-2007: Working for Equity and Quality in Health* Harare: GoZ.

MoHCW (2003) Manpower Development Plan 2003: Improving the Development of Human Resources for Health Harare: GoZ.

MoHCW, UNFPA, UNICEF &WHO (2005) *Assessment of Maternal and Neonatal Health Services in Zimbabwe*. Final Working Draft, Zimbabwe.MoHCW 2007 *The Access to Health Care Services Study* Harare: GoZ.

MoHCW (2007) *Zimbabwe Maternal and Neonatal Health Roadmap 2007-2015* Harare: GoZ.

MoHCW (2008a) *Zimbabwe HRH Situation Analysis Report-2008* Harare: GoZ.

MoHCW (2008b) *Zimbabwe: National Health Profile 2008* Harare: GoZ.

MoHCW (2009) *The National Health Strategy for Zimbabwe (2009-2013): Equity and Quality in Health: People's Right* Harare: GoZ.

MoHCW (2010) *The Zimbabwe Health Sector Investment Case (2010-2012) : Accelerating progress towards the Millennium Development Goals* Harare: GoZ.

MoHCW and HSB (2010) *Human Resources for Health Strategic Plan 2010-2014* Harare.

MoHCW (2011) *Health Transition Fund -A Multi-donor Pooled Transition Fund for Health in Zimbabwe: Supporting the National Health Strategy to improve access to quality health care in Zimbabwe* Harare.

MoHCW (2012) *The Quality of Maternal and Newborn Care in Zimbabwe: Findings from a National Integrated health Facility Assessment* Harare*:* NIHFA Task Force Ministry of Health & Child Welfare.

Wheeler, M. (2010) Analysis of Internal Migration within and from the Ministry of Health and Child Welfare: Zimbabwe Draft Report, DFID-Human Resources Development Centre.

WHO and MOHCW (2002) 'Humanitarian Assistance and Recovery Programme,' *Rapid Needs Assessment for the Health Sector in Zimbabwe*. MOHCW, Harare: GoZ

WHO (2005) *Guide to health workforce development in post-conflict environments*.Geneva.

WHO (2008) *Ouagadougou Declaration on Primary Health Care and Health Systems in Africa: Achieving Better Health for Africa in the New Millennium* Ouagadougou: WHO African Region.

WHO (2009) Human Resources for Health Country Profile Zimbabwe Geneva: World Health Organisation 7 Global Workforce Alliance.

Witter, S., Chirwa, Y., Munjoma, M., Mashange, W., Ensor, T. and McPake, B. (2011) Removing financial barriers to access reproductive, maternal and newborn health services: the challenges and policy implications for Human Resources for Health (HRH): Zimbabwe case study (in McPake, B., Witter, S., Ensor, T., Fustukian, S., Newlands, D., Martineau, T. *Removing financial barriers to access reproductive, maternal and newborn health services: the challenges and policy implications for Human Resources for Health)*. Research paper for DfID. http://www.dfid.gov.uk/r4d/Output/189473/Default.aspx?utm_source=feedburner&utm_medium=email&utm_campaign=Feed%3A+R4DMaternalHealth_Docs+%28R4D+Maternal+Health+Documents%29

World Bank (2015) *Health public expenditure review: Zimbabwe, Report No. 97175-ZW* Harare: World Bank Group.

ZDHS (2011) *Zimbabwe; Demographic and Health Survey 2010-11* Zimbabwe National Statistics Agency Harare, Zimbabwe & ICF International, Inc. Calverton, Maryland USA.

Annexes

Sampling for the survey

District	**Ditsrict 1**					**District 2**					**Bikita**				
Cadre	Provincial total (public)	Govt	Munic	Mis	Pvt	Provincial total (public)	Govt	Munic	Mis	Pvt	Govt	Munic	Mis	Pvt	**Total**
Nurses	2460	18	18	12	2	1606	11	11	8	4	11	11	8	1	116
midwives**	2460	18	18	12	2	1606	11	11	8	4	11	11	8	1	116
Doctors	168	6	6	4	2	17	1	1	1	1	1	1	1	1	25
clinical officers	0	6	6	4	2	1	1	1	1	1	1	1	1	1	26
environmental officers*	28	6	6	4	2	16	1	1	1	1	1	1	1	1	26
	total	53	53	37	9	3246	26	26	19	11	26	26	19	5	309

* used pharmacy staff as best guess at this stage

** used nurses as best guess at this stage

Assumptions: 7 districts in District 1 also assumed roughly even distribution across districts (which is obviously not the case, but was updated when we get there)

Also assumed 50:50 distribution between govt and municipal facilities, within the public category

Calculate mission and private sector according to the national proportion of (23% mission; 12% private)

Numbers rounded up or down (but all zeros rounded up to 1) 0.353846154 0.184615385

Annex 2. Questionnaire final version

HW Incentives Sub-study 2	***Identification***	**Site Code**	**Interviewee Number**	**Interviewer code**	**Project**
					ReBUILD

Site Codes: Bulawayo=1, Masvingo District=2, Bikita District =3

INTERVIEW DETAILS

	Year		**Month**		**Day**		**Start Time***					**End Time**					**Response**
First visit	1	3							:					:			
Second visit	1	3							:					:			

Interviewer's name ……..

REFUSAL PARTICULARS (REFER TO REFUSAL CODES IN TABLE BELOW)

a. At what point did the respondent refuse?

Other (Specify)…… ☐

You do not have to give any reasons but if you would like to tell us it will help us.

b. What was the reason for the refusal?(REFER TO REASON CODES)

Other (Specify)…… ☐☐

* 24 hour time

<table>
<tr><td>Response Codes
1 = Interview completed
2 = Interview not completed
3 = Appointment made for another interview
4 = Selected respondent not at home
5 = Refusal by respondent
6 = Other</td><td rowspan="2">Reason Codes:
Upfront refusals
01 = Too busy to grant interview
02 = Too late in the evening
03 = Not willing to participate in any survey/interview
04 = Objected to the topic of the survey (Personal remuneration)
05 = Objected to being interviewed by the specific interviewer
06 = Afraid
07 = Fear of breach of confidentiality
08 = Government not doing enough for him/her
09 = Other</td></tr>
<tr><td>Refusal Codes:
1 = At the gate or door
2 = After explanation of the survey and the process
3 = After the first respondent has been identified (before interview)
4 = Other (detailed codes to be provided later)</td></tr>
<tr><td>Refusals during individual interview:
12 = Objected to provide any/some information on the topic
13 = Objected to provide personal/confidential information
14 = Unable to provide requested information
15 = Refused to continue because he/she got irritated/bored
16 = Refused to continue because he/she got angry
17 = Refused to continue because he/she lost interest or got tired
18 = Refused to continue because he/she was in a hurry</td><td></td></tr>
</table>

RESPONDENT DETAILS: I would like to start by asking some general questions about you and your family

1.BIOGRAPHICAL DATA

1.1	Mark respondent's sex	**Male**	**Female**	
		1	**2**	

1.2	What is your current marital status?				
	Single	1	Single with children	2	
	Cohabiting	3	Married with children	4	
	Married without children	5	Divorced	6	
	Widowed	7			

1.3	How old are you (**completed years**)? **88 Don't Know**			**Years**	

1.4	What is your nationality?				
	Zimbabwean	1	Other African	2	
	Outside Africa	3			

1.5	Race	Black	White	Coloured	Asian	Other	
		1	2	3	4	5	

1.6	What is your area of origin?				
	Harare	1	Bulawayo	2	
	Mashonaland Central	3	Mashonaland East	4	

	Mashonaland West		5	Masvingo	6	
	Manicaland		7	Matebeleland North	8	
	Matebeleland South		9	Midlands	10	
	Expatriate (spec)		11			

SOCIO- ECONOMIC DATA

2.1	What is the highest professional training you completed?					
	Certificate in Midwifery	1	Diploma in Midwifery		2	
	Certificate in Nursing (PCN)	3	Diploma in Nursing		4	
	Certificate in Nursing (SCN)	5	Diploma in Admin		6	
	Degree in Nursing	7	Certificate in Environmental health		8	
	Diploma in Environmental Health	9	MBCHB		10	
	Degree Environmental Science and Health	11	Post Graduate (Spec)		12	
	Other (spec)				13	

2.2	How many people are there in your household (include all those sleeping in the dwelling for at least three of the last 12 months, including children and adults)?			

2.3	How important is your overall income to the total household income? (**Probe**)		
	It is the only income	1	
	Largest part of the household income	2	

	It makes a substantial contribution (more or less as much as other household income sources)	3	
	Helps to increase total household income as an add-on to other income	4	

2.4	For how many people is your income the main source of livelihood? (by that I mean how many people are dependent on your income)			

2.5	How much did your household spend on food consumption in the last month? **Write amount in US$; 8888 = Don't know**	**$**						

2.6	How much did your household spend on non-food consumption in the last month (clothing, cooling, domestic rents, education fees, health costs, leisure, phone bills etc)? **Write amount in US$;**	**$**						

2.7	How much did your household spend in total last month**? Write amount in US$;**	**$**						

2.8	Did the household make any savings last month?	**Yes**	**No**	**Don't Know**	***if 2 or 8 go to q. 2.10***
		1	**2**	**8**	

2.9	**If yes**, how much was saved? **Write amount in US$; 8888 = Don't know**	**$**						

2.10	Did the household have to borrow money last month?	**Yes**	**No**	**Don't Know**	***if 2 or 8 go to q. 2.12***
		1	**2**	**8**	

2.11		**$**						

	If yes, how much was borrowed? **Write amount in US$; 8888 = Don't know**						

2.12	Have you taken out a loan in the past twelve months?	**Yes**	**No**	**Don't Know**	***if 2 or 8 go to q. 2.14***
		1	**2**	**8**	

2.13	What was the loan for?	

2.14	Does your household have any of the following (still functioning)? ***READ RESPONSES***		**Yes**	**No**	
	a	Electricity	1	2	
	b	Television	1	2	
	c	Radio	1	2	
	d	Video/DVD	1	2	
	e	Refrigerator	1	2	
	f	Mobile Telephone	1	2	
	g	Fixed Telephone	1	2	
	h	Running water	1	2	
	i	Shared WC/pit latrine	1	2	
	j	Own WC/pit Latrine	1	2	
	k	Own Flush toilet	1	2	
	l	Shared Flush toilet	1	2	

3. EMPLOYMENT AND INCENTIVES: Current employment and workload

3.1	Where do you work?				
	Central hospital	1	Provincial hospital	2	
	District hospital	3	Rural Hospital	4	
	Rural Health Centre (Govt)	5	Rural Health Centre (RDC)	6	
	Government clinic	7	Mission hospital	8	
	Mission clinic	9	Private hospital	10	
	Private clinic	11	Private maternity home	12	
	Municipal Hospital	13	Municipal clinic	14	
	Other (Spec)	15			

3.2	What is your professional title?					
	Specialist	1	GP/Medical Officer		2	
	Medical Assistant	3	Midwife		4	
	Registered General Nurse	5	Community Nurse		6	
	Clinical Officer	7	Environmental Health Officer		8	
	Environmental Health Technician	9	Primary Care Nurse		10	
	State Certified Nurse	11	Other (Spec)		12	

3.3	How many years in total have you been working in the health care sector? **Fill in number of completed years.**			

3.4	How long have you been working for your current employer? (Current place of work) **Fill in number of completed years**			

3.5	How many hours do you work each week on average in your official job? ***Fill in number of hours;*** **888= Don't know;**				

3.6	Has this changed between 2007 and 2012 years?	**Yes**	**No**	***if 2 go to***

		1	**2**	***q. 3.8***

3.7	***If yes***, how? *State increase or decrease in average number of hours worked between 2007 and now (e.g. + 5; -5)*	

3.8	Has your workload changed between 2007 and 2012 years?	**Yes**	**No**	***if 2 go to***
		1	**2**	***q. 3.10***

3.9	***If yes***, how? *State increase or decrease in workload?*	

3.10	Do you have any private practice in addition to your official job?	**Yes**	**No**	***if 2 go to***
		1	**2**	***q. 3.14***

3.11	***If yes***, how many hours do you work on average in your private practice each week? ***Fill in number of hours;***				

3.12	Has this changed over the past few years?	**Yes**	**No**	***if 2 go to***
		1	**2**	***q. 3.14***

3.13	***If yes*** how? *State increase or decrease in average number of hours worked between 2007 and now (e.g. + 5; -5)*	

	…… …… ……	

3.14	Do you carry out any other activities to generate income? (e.g. non-medical activities, such as trading or farming) ……	**Yes**	**No**	***if 2 go to q3.18***
		1	**2**	

3.15	***If yes***, how many hours do you work on average in your private income generation each week? *Fill in number of hours;*				

3.16	Has this changed over the past few years?	**Yes**	**No**	***if 2 go to q. 3.18***
		1	**2**	

3.17	***If yes*** how? *State increase or decrease in average number of hours worked between 2007 and now (e.g. + 5; -5)* …… …… …… ……	

ASK PARTICIPANTS WHO WORK WITH PATIENTS. DO NOT ASK ENVIRONMENTAL HEALTH WORKERS Q3.18 – 3.27.

3.18	How many patients do you see on average in a week in your official job? ***Fill in number of patients.***				

3.19	Has this changed over the past few years?	**Yes**	**No**	***if 2 go to q. 3.21***
		1	**2**	

3.20	**If yes** how? *State increase or decrease in average number of patients seen between 2007 and now (e.g. + 5; -5)*	

3.21	(***FOR NURSES ONLY***) Do you have formal training in midwifery?	**Yes**	**No**	**NA**	
	Write NA for Drs and Cos	**1**	**2**	**3**	

3.22	How many deliveries do you undertake in a week on average, in your official job? ***Fill in number of deliveries***				**if 000 go to q.3.25**

3.23	Has this changed over the past few years?	**Yes**	**No**	***if 2 go to q. 3.25***
		1	**2**	

3.24	**If yes** how? *State increase or decrease in average number of deliveries between 2007 and now (e.g. + 5; -5)* ....

3.25	How many deliveries do you undertake in a week on average, in your private practice**? *Fill in number of deliveries (put 000, if they don't have private patients)***				**if 000 go to q.4.1**

3.26	Has this changed over the past few years?	**Yes**	**No**	***if 2 go to q. 4.1***
		1	**2**	

3.27	**If yes** how? *State increase or decrease in average number of deliveries between 2007 and now (e.g. + 5; -5)*	

4. TRAINING

4.1	Have you ever been in government employment?	**Yes**	**No**	***If 2 go to***
		1	**2**	***q. 4.5***

4.2	Have you ever received training while in government employment?	**Yes**	**No**	***If 2 go to***
		1	**2**	***q. 4.5***

4.3	***If yes***, what type of training have you received?		**Yes**	**No**	
	a	University (local course)	1	2	
	b	Medical School	1	2	
	c	Donor led clinical training (Post Basic)	1	2	
	d	Donor led non-clinical training (Post Basic)	1	2	
	e	In-house/in service training (clinical/non-clinical)	1	2	
	f	Seminar/short course	1	2	
	g	Post Basic Training (MoHCW)	1	2	
	h	Other (specify)	1	2	

4.4	***If yes***, what type of training do you expect to receive in the near future?		**Yes**	**No**	
	a	University (local course)	1	2	
	b	Medical School	1	2	
	c	Donor led clinical training (Post Basic)	1	2	
	d	Donor led non-clinical training (Post Basic)	1	2	
	e	In-house/in service training (clinical/non-clinical)	1	2	
	f	Seminar/short course	1	2	

	g	Post Basic Training (MoHCW)		1	2	
	h	Other (specify)		1	2	

4.5	Have you ever received training in your current employment?	**Yes**	**No**	***If 2 go to q. 4.8***
		1	**2**	

4.6	***If yes***, what type of training have you received?		**Yes**	**No**	
	a	University (local course)	1	2	
	b	Medical School	1	2	
	c	Donor led clinical training (Post Basic)	1	2	
	d	Donor led non-clinical training (Post Basic)	1	2	
	e	In-house/in service training (clinical/non-clinical)	1	2	
	f	Seminar/short course	1	2	
	g	Post Basic Training (MoHCW)	1	2	
	h	Other (please specify)	1	2	

4.7	***If yes***, what type of training do you expect to receive in the near future?		**Yes**	**No**	
	a	University (local course)	1	2	
	b	Medical School	1	2	
	c	Donor led clinical training (Post Basic)	1	2	
	d	Donor led non-clinical training (Post Basic)	1	2	
	e	In-house/in service training (clinical/non-clinical)	1	2	
	f	Seminar/short course	1	2	
	g	Post Basic Training (MoHCW)	1	2	
	h	Other (please specify)	1	2	

4.8	What do you think are the main benefits of training? *(Please mark all relevant answers)*				
	a	Greater knowledge	1		**Rank alongside the top three reasons with the ranks 1,2 and 3**
	b	Can charge higher rates in my private practice	2		
	c	Feel more confident	3		
	d	Get higher status (from peers, parents and public)	4		
	e	In-house/in service training (clinical/non-clinical)	5		
	f	Get more patients and more referrals	6		
	g	Quicker promotion	7		
	h	Increased chance of getting a job with an international organisation	8		
	i	Increased chance of getting a job in the diaspora	9		
	j	Opportunity to influence government policy Improved/More job opportunities	10		
	k	Enhanced professional reputation/status	11		
	l	Good per diems during training.	12		
	m	Skills and ability	13		
	n	Other (please specify)	14		

5. OFFICIAL/MAIN INCOME

5.1	How much do you earn each month in basic net salary from your main or official job**? *Write amount in US$;***	**$**					

5.2	Do you receive that income regularly?	**Yes**	**No**	***if 2 go to***
		1	**2**	***q. 5.5***

5.3	Has that basic net income changed between 2007 and 2012?	**Yes**	**No**	***if 2 go to***
		1	**2**	***q. 5.5***

5.4	***If yes***, how has it changed? ***Fill in amount in US$*** (positive or negative, depending on increase or decrease in salary)	

5.5	Do you receive additional financial allowances or incentives?	**Yes**	**No**	***if 2 go to***
		1	**2**	***q. 5.12***

5.6	***If yes***, how much on average do these allowances amount to each month? ***(READ RESPONSES)*** ***Fill in amount in US$*** **(or put 0000 if this type of allowance is not received)**		**$**	
	a	Rural area allowance		
	b	On Call/Locum allowance		
	c	Transport allowance		
	d	Housing allowance		
	e	Retention allowance		
	f	Uniform allowance		

	g	Vehicle loan			
	h	Any other? (e.g. income from sales of items to patients) Specify			

5.7	Are these allowances or incentives fixed amounts per month?		Fixed	Workload related	N/A	
	A	Rural area allowance	1	2	3	
	B	On Call/Locum allowance	1	2	3	
	C	Transport allowance	1	2	3	
	D	Housing allowance	1	2	3	
	E	Retention allowance	1	2	3	
	F	Uniform allowance	1	2	3	
	G	Vehicle loan	1	2	3	
	H	Any other? (e.g. income from sales of items to patients) Specify	1	2	3	

5.8	Do you receive these allowances regularly?		Always	Sometimes	Once	N/A	
	A	Rural area allowance	1	2	3	4	
	B	On Call/Locum allowance	1	2	3	4	
	C	Transport allowance	1	2	3	4	
	D	Housing allowance	1	2	3	4	
	E	Retention allowance	1	2	3	4	
	F	Uniform allowance	1	2	3	4	
	G	Vehicle loan	1	2	3	4	
	H	Any other? (e.g. income from sales of items to patients) Specify	1	2	3	4	

5.9		Yes	No	*if 2 go to*

	Have these allowances changed over the previous few years?	**1**	**2**	***q. 5.12***

5.10	***If yes***, how?		**it is a new allowance/ did not exist before**	**existed but has increased**	**existed but has decreased**	N/A	
	a	Rural area allowance	1	2	3	4	
	b	On Call/Locum allowance	1	2	3	4	***if 1 or 4 go to q.5.12***
	c	Transport allowance	1	2	3	4	
	d	Housing allowance	1	2	3	4	
	e	Retention allowance	1	2	3	4	
	f	Uniform allowance	1	2	3	4	
	g	Vehicle loan	1	2	3	4	
	h	Any other? (e.g. income from sales of items to patients) Specify	1	2	3	4	

5.11	***If it has increased or decreased***, by how much? ***Fill in amount of increase/decrease in US$, + for increase and – for decrease; 8888= Don't Know***		**$**	
	A	Rural area allowance		
	B	On Call/Locum allowance		
	C	Transport allowance		
	D	Housing allowance		
	E	Retention allowance		
	F	Uniform allowance		
	G	Vehicle loan		

	H	Any other? (e.g. income from sales of items to patients) Specify			

5.12	Do you receive any of the following benefits in kind?			**Yes**	**No**	
	A	Housing		1	2	
	B	Food		1	2	
	C	Health care		1	2	
	D	Car		1	2	
	E	Any other? Specify		1	2	

5.13	Do you receive any payments from user fees?	**Yes**	**No**	**Don't Know**	***if 2 or 8 go to q. 5.17***
		1	**2**	**8**	

5.14	***If yes***, how much do you receive, on average, per month? ***Write amount in US$;***	**$**					

5.15	Has that level of income changed over the past few years?	**Yes**	**No**	***if 2 go to q. 5.17***
		1	**2**	

5.16	If so, how has it changed***? Fill in amount in US$*** (positive or negative, depending on increase or decrease in salary) (use plus for increases; minus for decreases);	

5.17	Do you receive any per diems/T&S (e.g. for workshops, training or other travel)?	**Yes**	**No**	***if 2 go to q. 6.1***
		1	**2**	

5.18	***If yes***, how much is the per diem that you are usually paid? ***Write amount in US$;***	**$**					

5.19	How many days per month, on average, would you receive this per diem? ***Fill in number of days;***				

6. PRIVATE/ADDITIONAL INCOME

DO NOT ASK EHTs and EHOs

6.1	Do you have a private income from working in a private practice (outside your main job, if you are salaried)?	**Yes**	**No**	***if 2 or 8 go to q. 7.1***
		1	**2**	

6.2	Which of these options best describes where this private clinical practice is located?		
	Same building as my public employment		1
	At my home		2
	At the home of a colleague		3
	Rented premises		4
	Go to the patient/client's home		5
	Other (please specify)	.....	6

6.3	Who owns the private practice?		
	I own it		1
	I share ownership of it		2
	Someone else owns it		3
	Other (please specify)	.....	4

6.4	How much money do you earn per month from this private practice? ***Write amount in US$;***	**$**					

6.5	Has this level of income changed since 2007?	**Yes**	**No**	***if 2 go to q. 7.1***
		1	**2**	

6.6	***If yes***, how has it changed? Fill in amount in US$ (positive or negative, depending on increase or decrease in salary) (use plus for increases; minus for decreases);	

7. MOTIVATION AND PERCEPTIONS

7.1		What are the main factors that motivate you to stay in your job? (***Please rank in order of importance) Put number showing importance. 01= most important; 10 = least; please put 00 for those that are not mentioned.)***		
	a	Salary/pay	1	
	b	Additional allowances	2	
	C	Good working conditions	3	
	d	Opportunities for training	4	
	e	To help increase the number of patients for private work	5	
	F	Social status	6	
	g	Security of work	7	
	h	Opportunity to serve the community	8	
	I	No better options are available elsewhere	9	
	J	Good relations with colleagues	10	
	K	Other (please specify)	11	

7.2 How has your work life changed since the end of the crisis in 2009?

Open question: note key phrases from respondent's answer

7.3. What factors are important to motivate you to work in rural areas?

7.4. What are your plans for the future in terms of career progression and enhancement?

We would now like to ask you a theoretical question about future employment. Please remember there are no right or wrong answers and it is your opinion that matters.

7.5	Imagine that the government wants to introduce a new contract to employ you in public facilities in rural areas. Would you accept this contract?	**Yes**	**No**	***if 1 go to q. 7.8***
		1	**2**	

7.6	***If NO***, what would you require in order to accept the contract?	

7.7	What payment would you require in order to accept this contract? ***Write amount in US$;***	**$**					**Thank respondent and end the interview**

7.8	***If yes***, why are the conditions of the contract acceptable?	

7.9	What payment would you expect if you were to accept this contract? ***Write amount in US$;***	**$**					

Checked by Supervisor		**Name**	
Code		**Signature**	
		Date	