

Struggling and Coping to Serve

The Zambian Health Workforce as Depicted in the
Public Expenditure Tracking and Quality of Service
Delivery Survey

Oscar F. Picazo

2008



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ABBREVIATIONS AND ACRONYMS

DHMT - District Health Management Team(s)
FTE - full-time equivalent
HR or HRH - human resources (for health)
IDF - Institutional Development Fund
IMF - International Monetary Fund
MDG - Millennium Development Goal(s)
MOFNP - Ministry of Finance and National Planning
MOH - Ministry of Health
PE - personal emoluments
PET/QSDS - Public Expenditure Tracking/Quality of Service Delivery Survey
RHC - rural health center
SIDA - Swedish International Development Agency
UHC - urban health center
UNZA - University of Zambia
ZK - Zambian kwacha

Vice President: Obiageli Ezekwesili
Country Director: Michael Baxter
Sector Manager: Christopher Thomas
Task Team Leader: Oscar F. Picazo

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EXECUTIVE SUMMARY

1. This paper reports the findings of the Zambia PET/QSDS pertaining to human resources for health in Zambia. High staff vacancies (33.5 percent) especially of clinical workers (41.4 percent) are crippling hospital and clinic operations. These health facilities are increasingly relying on expatriate staff (especially hospitals) and volunteer staff (especially health centers). Lack of staff is exacerbated by high rates of absenteeism (21 percent self-reported) and tardiness (43 percent self-reported), reducing the amount full-time equivalent (FTE) workers. As a result, patient queues and waiting times are long (average of 65 minutes). More seriously, the length of time spent on patient care is being compromised. Workers are also resorting to various coping mechanisms (both inside and outside the facilities where they work) to augment their incomes. Heavy official workloads and income-augmenting activities take their toll on workers' time, and possibly well-being, contributing to high rates (44 percent of staff) of dissatisfaction among staff.

2. Salaries are highly compressed, reducing their effectiveness in providing incentives. The plethora of cash and non-cash benefits that government has provided to ease the incentive problem has become unwieldy; it also makes it ever more difficult to forecast the fiscal implications. The incentive effect of salaries is further dampened by a number of salary management problems that afflict a not-insignificant number of staff: delay in the receipt of salaries (suffered by 22 percent of staff); non-receipt of the full amount of salaries (about 15 percent of staff); unauthorized salary deductions (15.5 percent of staff); and staff payment of "expediter's fee" to obtain salaries (10 percent of staff).

3. The paper recommends that the country obtain national commitment to increase fungible (flexible) financing to support health workforce improvement and incentives. The government should formulate an overall wage strategy, improve payroll management, and enforce rules on absenteeism and tardiness, and provide better incentives for these two problems to be reduced. Finally, policymakers should explore performance-based payment to workers and to focus on team incentives.

CHAPTER 1 - INTRODUCTION

1. *Zambia's economy has witnessed a changing fortune, and this has been reflected in its health outcomes.* Over the past three decades, a sharp decline in the price of Zambia's chief export, copper, has led to commensurate decline in gross national income per capita from US\$590 in 1975 to US\$300 in 2000. Although per capita income has climbed to US\$400 in 2004 and to US\$630 in 2006 due to resurgent copper prices, Zambia remains a poor country with poor human-development indicators especially on health. The 2006 infant mortality rate is 102 per 1,000 live births while the under-five mortality rate inched up to 182 (from 180 at the start of the decade), way off the 2015 target of lowering this to 60 in the country's Millennium Development Goals (MDGs). The 2005 maternal mortality ratio is 830 per 100,000 live births, one of the highest in the world. As much 17 percent of the population 15-49 is afflicted with HIV/AIDS. Part of the explanation for these worsening health outcomes is the increasing scarcity of health workers at the time when the HIV/AIDS and other resurgent epidemics, such as malaria and tuberculosis, are raging. For instance, the population-per-physician ratio worsened from 1 physician per 7,900 in the early 1980s to 1:11,100 in the mid-1990s and even higher to 1:14,500 in the early 2000s (World Development Indicators 2003 and 2008).
2. *This paper reports the findings of the PET/QSDS pertaining to human resources for health in Zambia.* The PET/QSDS was undertaken in mid-2006 to provide quantitative assessment of the state of health service delivery in the country. One component of the survey focused on the management of health personnel, including staff availability, vacancy, absenteeism, and tardiness; staff turnover; staff workload, use of time, and morale; and staff salary and benefits.
3. *The PET/QSDS survey adopted a multistage sampling frame involving provinces, districts, and health facilities, and within them, health workers and patients.* Table 1 provides the sampling framework for health facilities. In addition, the survey also interviewed patients and health workers. For patients, the sampling procedure involved picking every 4th to 7th patient on the queue, depending on the utilization level at each facility. Five patients were chosen per facility. For health workers, at least two staff from each health facility were interviewed.
4. *The following survey instruments were used:* (a) a health facility questionnaire, (b) a patient questionnaire, (c) a health worker questionnaire, and (d) a District Health Management Team (DHMT) questionnaire. Details of these instruments are found in the larger Public Expenditure Review report. Other sources of information were tapped, including the MOH Headquarters, the Ministry of Finance, Provincial Health Offices, and District Health Offices, and Medical Stores, Ltd.

Table 1. Sampling Framework for Health Facilities and District Health Management Teams

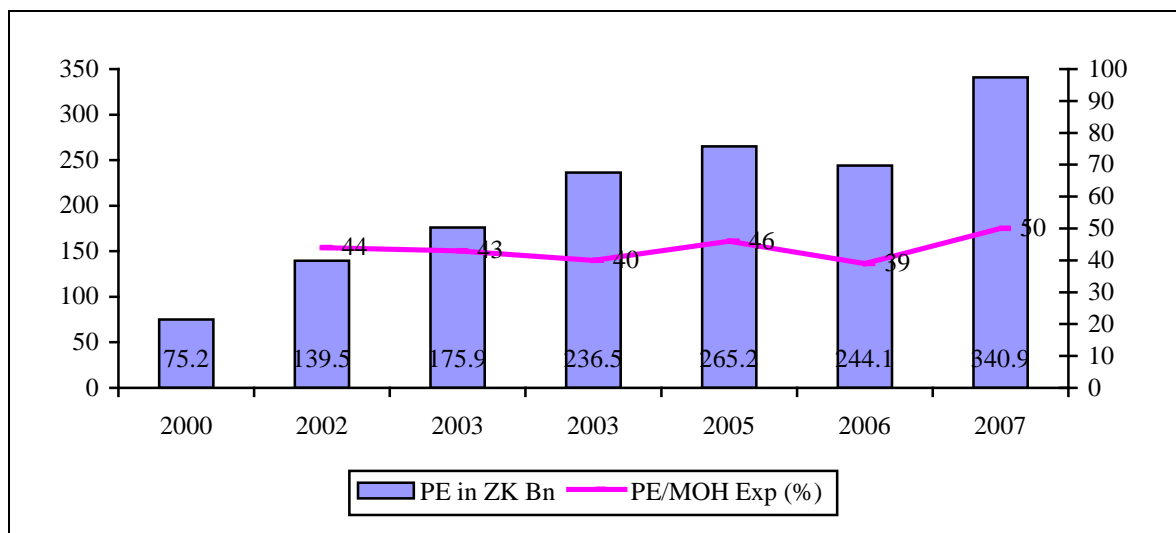
Province (No. of Districts)	DHMTs	Hospitals	UHC and RHC	Total Facilities
Lusaka Province (3)	3	3	17	23
Copperbelt Province (4)	4	4	30	38
Southern Province (5)	5	5	25	35
Western Province (4)	4	3	28	35
Northern Province (5)	5	3	32	40
Total	21	18	132	171

CHAPTER 2 - KEY FINDINGS

1. *MOH personnel expenditures steadily increased in nominal levels until 2005; it dipped in 2006 but is expected to rise dramatically to ZK340.9 billion in 2007.*

Reflecting these trends in absolute levels, personal emoluments (PE) as a share of MOH expenditures peaked at 46 percent in 2005, and fell to 39 percent the following year (Figure 1), although it is estimated to garner 50 percent of the MOH's budget in 2007, the highest-ever share. MOH PE/GDP is about 1 percent of GDP.

Figure 1. Personnel Expenditures in MOH Budget (ZK Billion) and Share of Personnel Expenditures to Total MOH Expenditures (%), 2000-2007



2. *Human resource issues have become central in recent years and will continue to be topical in the near future.* On the one hand, the MOH is wracked by a human resource crisis. Expanding services to meet the MDGs would require filling the large vacancies that exist today. Indeed, the new Human Resources for Health (HRH) Strategic Plan, 2006-2010 calls for an eventual increase in staffing levels from about 23,000 at present to 51,000. On the other hand, sustaining the increasing amount of resources devoted to PE would be a daunting challenge, given the government's patchy record of managing its overall wage bill (IMF Country Case Study, 2006). In between these "expansionist" and "sustainability" concerns are a range of factors that need to be addressed:

- The facts, as shown in the National Health Accounts analysis, that (a) an increasing proportion of MOH resources (and also donor resources, for that matter) are going to administration rather than service provision; and (b) that

MOH facilities at all levels are far more labor-intensive than their mission and for-profit facility counterparts.

- The facts, to be discussed in this paper, that (a) staffing patterns continue to be perverse, as reflected in the composition of established posts; (b) absenteeism, tardiness, and morale reduce the actual availability of staff already at post, and these problems do not necessarily disappear with increases in salaries; and (c) multiple cash allowances and in-kind benefits are highly fragmented and only cover a minor percentage of MOH staff.

STAFFING PATTERNS AND AVAILABILITY

3. *Skewed staffing patterns persist as reflected in the composition of established posts.* Urban health centers (UHCs) have the heaviest staffing for administrative posts: 14.0 percent of all available UHC posts are administrative, compared to only 10.2 percent for hospitals (Table 2). Rural health centers (RHCs) have the heaviest staffing for low-skill, non-clinical, non-administrative posts at 31.4 percent, compared to about 24-28 percent for UHCs and hospitals. RHCs also have the highest proportion of established clinical posts (63.4 percent), compared to 61.5 percent of hospitals, which should have a higher proportion of them. The table also shows the average number of staff per health facility. Note that UHCs have a higher preponderance of administrative staff, compared to hospitals.

Table 2. Established Posts and Average Number of Actual Staff by Major Occupational Groups, 2006

Staff	RHC		UHC		Hospitals		All	
	No.	%	No.	%	No.	%	No.	%
Established Posts								
Prof'l/clinical staff	590	63.4	1,240	61.8	1,291	61.5	3,124	62.0
Administrative staff	48	5.2	280	14.0	215	10.2	543	10.8
Non-clinical, non-administrative staff	292	31.4	485	24.2	594	28.3	1,371	27.2
Total	930	100.0	2,005	100.0	2,100	100.0	5,038	100.0
Average Number of Staff								
Prof'l/clinical staff	5	57	25	60	52	58	16	57
Administrative staff	0	0	6	14	8	9	3	11
Other staff	4	44	11	26	30	33	9	32
Total	9	100	42	100	90	100	28	100

4. *Health facilities have very high rates of staff vacancy.* The percentage of vacant posts is 42 percent in RHCs, 22 percent in UHCs, and 41 percent in hospitals (or 33.6 percent overall). Key posts left vacant all involve professional staff (Table 3). Districts with high rates of vacancy (>50 percent) among professional staff: Chilubi, 79 percent; Chinsali, 58 percent; Kalomo, 59 percent; Kasama, 66 percent; Mpika, 57 percent; Mpongwe, 53 percent; Mufulira, 66 percent; Nakonde, 60 percent; Namwala, 54 percent; Sesheka, 74 percent; Shangombo, 56 percent ([Figure 2](#)).

Table 3. Vacancy Rates (%) in Health Facilities, by Cadre, 2006

Cadre	RHC			UHC			Hospital		
	No. of estab posts	No. of vacant posts	% of posts vacant	No. of estab posts	No. of vacant posts	% of posts vacant	No. of estab posts	No. of vacant posts	% of posts vacant
Doctors	11	10	91	58	22	38	85	50	59
Clin officers	110	64	58	136	59	43	111	59	53
Medical licentiates	15	13	87	12	5	42	24	18	75
Midwives	109	55	50	282	90	32	179	63	35
Nurses	215	92	43	577	131	23	695	344	49
Env health officers	76	30	39	37	9	24	14	6	43
Pharma, etc.	18	12	67	34	7	21	37	17	46
Dentists, etc.	13	13	100	44	9	20	23	9	39
Lab, x-ray tech, etc.	15	12	80	48	13	27	76	37	49
Physio, etc.	8	8	100	15	3	20	47	34	72
Administrative staff	48	24	50	280	24	9	215	79	37
Other staff	292	55	19	485	62	13	594	152	26
Total	930	388	42	2,008	434	22	2,100	868	41

5. *The rate of staff turnover is worrisome, especially in rural health clinics.* In RHCs, out of 688 staff, 69 were "incoming" (10.0 percent) while 148 were "outgoing" (21.5 percent) (see Table 4). It would seem that the stock of RHC workers is not being replenished quickly enough. In UHCs, out of 1,756 staff, 166 were "incoming" (9.4 percent) while 172 were "outgoing" (9.8 percent). In hospitals, out of 1,442 staff, 133 were "incoming" (9.2 percent) while 60 were "outgoing" (4.2 percent), i.e., hospitals are retaining their staff better than RHCs. These rates of staff movement in and out of health facilities raise concerns not only about staff availability, but also about new staff's ability to adjust to the new workplace, and the old staff's institutional memory that s/he takes with her/him, and is lost from the facility.

6. *Health facilities are increasingly relying on expatriate and volunteer staff.* Hospitals have become highly dependent on expatriate staff: as much as 50 percent of them have an expatriate doctor, 25 percent have an expatriate nurse, and 14 percent have other expatriate staff. Some 3 percent of RHCs and 10 percent of UHCs also report having expatriate personnel. Volunteer staff are less common in hospitals, but they predominate in health centers: 32 percent of RHCs and 48 percent of UHCs rely on volunteers, half of whom work full-time and half, part-time.

Figure 2. Vacancy Rates (%) in Health Facilities by District and Type of Cadre, 2006

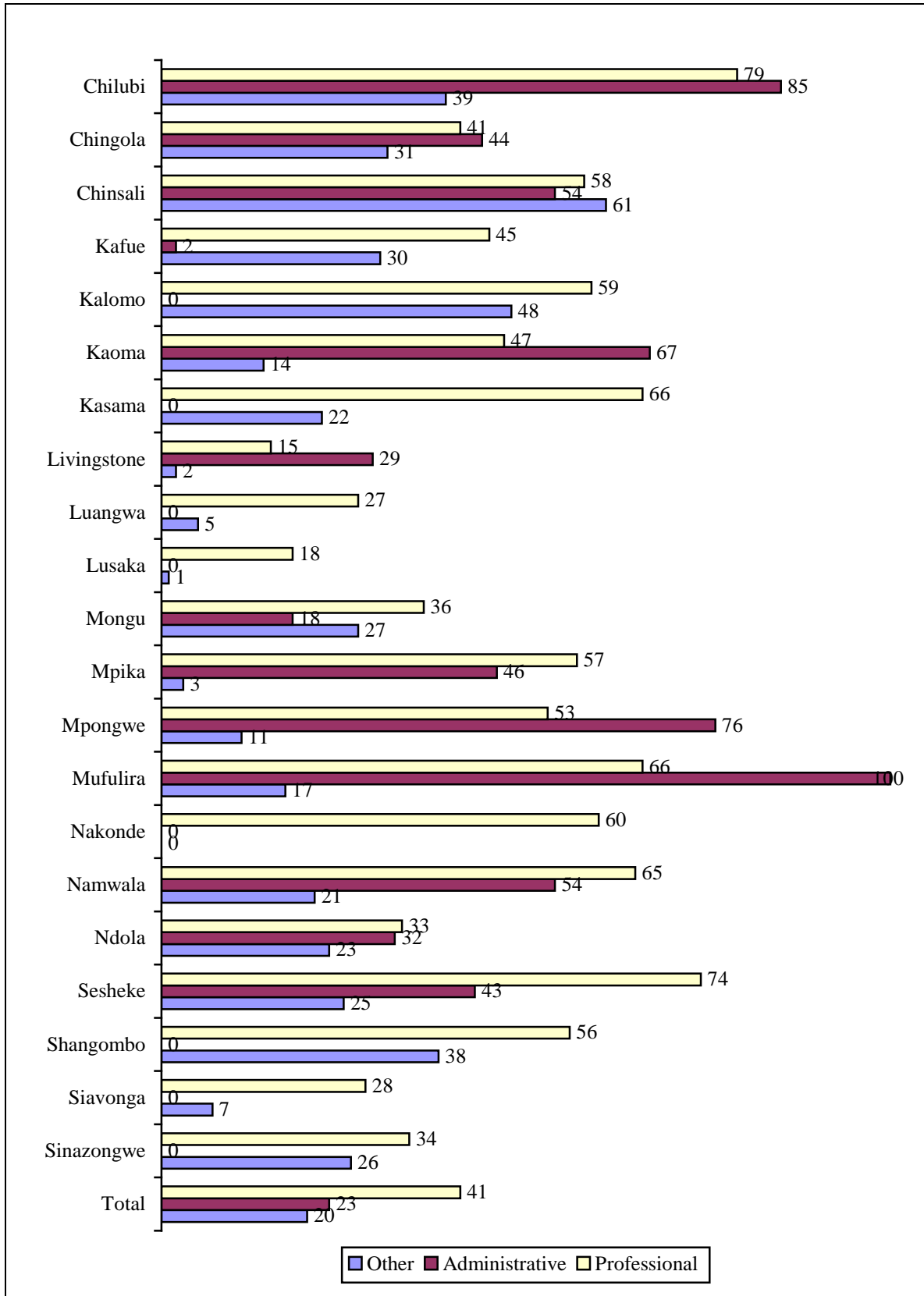


Table 4. Total Staff Who Joined or Who Left This Year, 2006

Staff Turnover	RHC	UHC	Hospitals	All
Total staff	688	1,756	1,442	3,886
No. of staff who joined the facility	69	166	133	368
No. of staff who left the facility	148	172	60	380
▪ Retired	15	20	7	42
▪ Transferred	116	120	24	260
▪ Resigned	10	22	14	46
▪ Dismissed or suspended	7	10	15	32

"UNACCOUNTED" WORKERS, STAFF ABSENTEEISM, AND TARDINESS

7. *The survey revealed inconsistency in the number of posts actually filled.* The total established posts for the health facilities included in the survey is 5,038 (See Table 5). Of this number, the vacant posts are 1,690, as reported in the discussion on vacancy rates above. Hence, the filled posts must be 3,348 (5,038 less 1,690). However, in the staff count made to assess staff absenteeism (see below), health facilities reckoned a total of 3,885 filled posts. The difference between the two figures (i.e., 3,385 and 3,438) is 537 posts, representing about 11 percent of the established posts (column "a"), or 10 percent of "vacant + filled posts" (column "b+c"). Possible reasons for this discrepancy include casual staff, or un-updated roster of established posts.

Table 5. Established, Vacant, Filled, and Absent Posts, 2006

Cadres	Estab'd Posts (a)	Vacant Posts (b)	% Vacancy Rate (b/a)*100	Filled Posts (c)	Vacant + Filled Posts (b+c)	Absent from Posts (d)	% Absent (d/c)*100
Doctors	154	82	53.2	84	166	26	31.0
Clin. Officers & med. lic.	408	218	53.4	219	437	44	20.1
Midwives & nurses	2,057	775	37.7	1,604	2,379	222	13.8
Other clinical staff	505	219	43.4	341	560	48	14.1
Administrative staff	543	127	23.4	410	537	17	4.2
Other staff	1,371	269	19.6	1,227	1,496	16	1.4
Total staff	5,038	1,690	33.5	3,885	5,575	373	9.6

Note: "Absent" is defined broadly in this table to mean any staff not physically in the health facility during the survey.

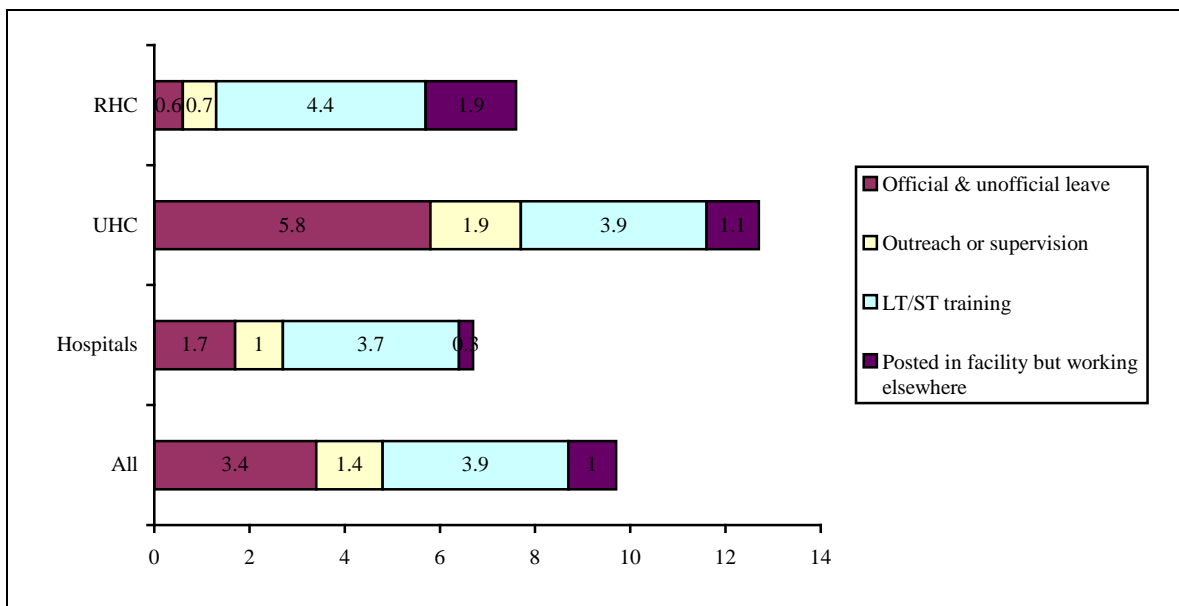
8. *A significant number of staff are posted in one facility but working elsewhere:* 13 in RHCs, 20 in UHCs, and 4 in hospitals (or 1.0 percent of all posted staff). Because these could not be physically accounted for in the facility where the survey was conducted, there is uncertainty about their actual existence.

9. *Staff absenteeism is considerable.* Some 9.6 percent of staff were not in the health facility during the survey: 7.5 percent in RHCs, 12.8 percent in UHCs, and 6.7 percent in hospitals. The composition of absent staff include 1.0 percent who were posted in the facility but working elsewhere; 3.3 percent who were on long- or short-term training; 1.4 percent who were on outreach or supervision; 3.2 percent who were on sick, annual, or vacation leave; and 0.2 percent who were absent without leave or cannot be accounted for.

10. *Clinical staff have the highest rates of absenteeism.* On the day of the survey, 31.0 percent of the doctors were not on site, as were 20.1 percent of clinical officers and medical licentiates, 13.8 percent of midwives and nurses, and 14.1 percent of other clinical staff. Administrative and other staff have much lower rates of absenteeism.

11. *Staff self-reported rate of absenteeism is much higher than the rate found in the facility survey.* For the previous month of the survey, 30 percent among RHC staff, 16 percent among UHC staff, 16 percent among hospital staff (or 21 percent overall) reported being absent from work at least once . The average number of days absent the previous month was 6 for RHC staff, 8 for UHC staff, 3 for hospital staff (or 5 days overall). The main reasons for being absent were sick self (40 percent of al responses), sick relatives (18 percent), and another extra job to attend to (9 percent) (Figure 3).

Figure 3. Composition of Absentees¹ (%), 2006



¹ "Absentees" are defined broadly as total number of posted staff not in the health facility during the survey.

12. *Tardiness is a much bigger problem than absenteeism.* Staff self-reported tardiness last month was 37 percent among RHC staff, 47 percent among UHC staff, and 47 percent among hospital staff (or 43 percent overall). The average number of days late the previous month was 3 days for RHC staff, 4 days for UHC staff, and 3 days for hospital staff (or 4 days overall). Workers reported that their tardiness was caused by long travel to work (35 percent of staff), sick relatives (17 percent), or they were "on-call" the previous day (17 percent).

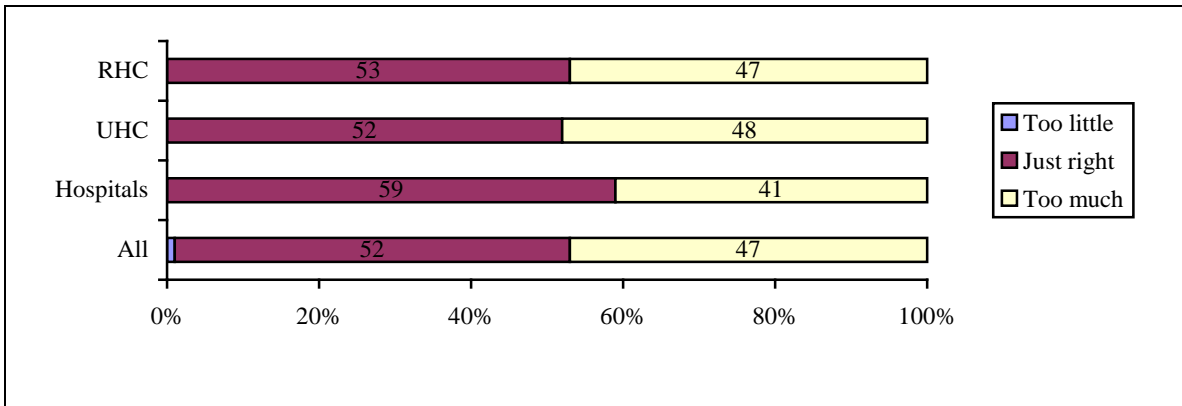
13. *Absenteeism and tardiness erode in a major way the actual availability of staff who are already in post.* The self-reported absenteeism of 21 percent (pertaining to 704 staff), at an average of 5 days absent/month, translates to 3,250 working days/month. Similarly, the self-reported tardiness of 43 percent (pertaining to 1,176 staff), at an average of 4 days tardy/month, at 1 hour tardiness each time, translates into 588 working days/month. Together, these add up to 4,108 working days per month that are lost. Conversely, if absenteeism and tardiness were fully eliminated, these losses would translate to a gain of 187 full-time equivalent staff, a sizeable number in Zambia's health system. That number is enough to staff 2 hospitals (at 90 staff/hospital), 4 urban health centers (at 42 staff/UHC), or 21 rural health centers (at 9 staff/RHC).

STAFF WORKLOAD AND MORALE

14. *Half of the staff surveyed complained of the long hours of work, because of the workload and their need to augment their meager incomes.* While most staff (91 percent) reported having a fixed work schedule, 47 percent reported long hours worked (Figure 4). The problem of long working hours afflicts workers in health centers more than hospitals. The long working hours, however, is an effect of both heavy workloads in the facility, as well as some staff's need to augment their incomes. Thus, on ordinary workdays:

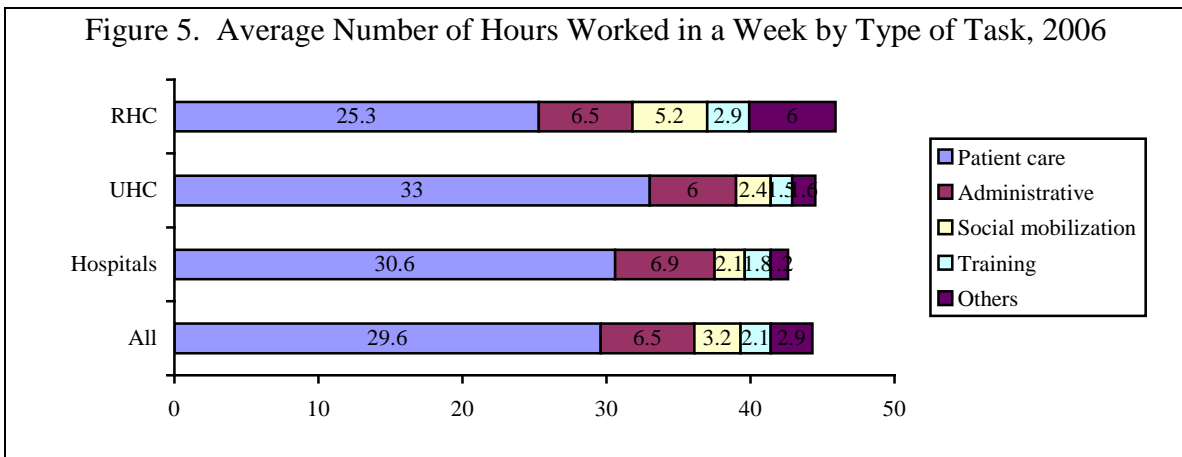
- UHC staff reported working 12 hours per day. Further probing reveals that 32 percent of staff engage in income-augmenting activities. Of these staff, 7 percent engage in dual practice inside the health facility, devoting as much as 5 hours outside official hours (off-duty) each day. In addition, 25 percent of staff engage in non-health enterprises within the health facility, devoting 7 hours on average each day to such enterprise.
- RHC staff reported working an average of 18 hours per day. Further examination shows that 9 percent of staff engage in income-augmenting activities. For these staff, 3 percent engage in dual practice inside the health facility, spending 1 hour outside official hours (off-duty) each day. Moreover, 6 percent of staff have non-health enterprises within the health facility, spending 6 hours on average each day to such enterprise.
- A lower percentage of hospital staff complained of long working hours. A lower percentage of them (5 percent) also engage in any form of enterprise within the health facility, and among those who do, the amount of time devoted to these enterprises is lower (2 hours on average). However, there is a far greater percentage (24 percent) of hospital staff engaging in dual practice outside the health facility.

Figure 4. Staff Perception of Number of Hours Worked, 2006

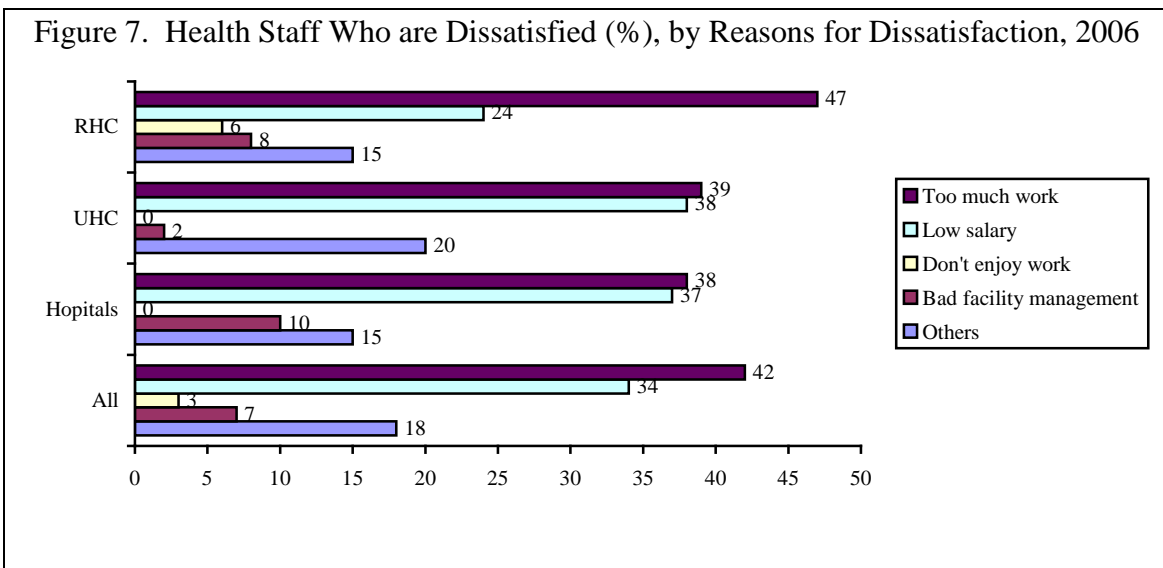


15. *Despite the reported long hours worked, the amount of time being spent by staff on direct patient care is being squeezed by other tasks (Figure 5).*

Figure 5. Average Number of Hours Worked in a Week by Type of Task, 2006



16. *About half of the staff surveyed have low morale. Staff are split in half, with 44 percent reporting satisfaction, 43 percent reporting dissatisfaction, and 12 percent indifferent (Figure 6). Rate of satisfaction appears highest among RHC staff (49 percent satisfied and 7 percent highly satisfied) while rate of dissatisfaction appears highest among hospital staff (45 percent dissatisfied and 9 percent highly dissatisfied) (Figure 7). Staff dissatisfaction arises mainly from stressful workloads (42 percent of staff) and low salaries (34 percent); only 7 percent reported bad facility management while 17 percent cited "other reasons".*



17. *Health staff are engaged in various income-augmenting economic activities.*

- In-facility dual practice - About 5 percent of staff engage in medical or health practice inside the health facility (Table 6). While this percentage is certainly not disturbing, the amount of time devoted to these "unofficial" activities within the facility premises raises concerns about crowding out the remaining time to do official duties. This problem is particularly acute in urban health centers where health professionals devote as much as 5 hours on average for private practice, presumably outside official hours. The equivalent length of time for private medical/health practice within the facility is 1 hour in rural health centers and 2 hours in hospitals.
- Out-facility dual practice - Dual practice is also undertaken outside the facility by about 18 percent of health staff. This outside dual practice takes up a significant amount of time across the different facility types: on average, an RHC staff engaging in this practice devotes 7 hours; a UHC staff, 12 hours; and hospital staff, 7 hours.

Table 6. Types of Income-Augmenting Activities Undertaken by Staff (%), 2006

Income-Augmenting Activities	RHC	UHC	Hospital	All
Medical or health practice inside the health facility but outside official hours	3 (1)	7 (5)	5 (2)	5 (3)
Medical or health practice outside the health facility	12 (7)	21 (12)	24 (7)	18 (9)
Non-medical, non-health activity inside the health facility	6 (6)	25 (7)	0 (0)	11 (6)
Agricultural work	41	32	45	39
Commercial or small-scale trade	18	37	35	29
Teaching	9	15	6	10
Other activities	7	4	19	9

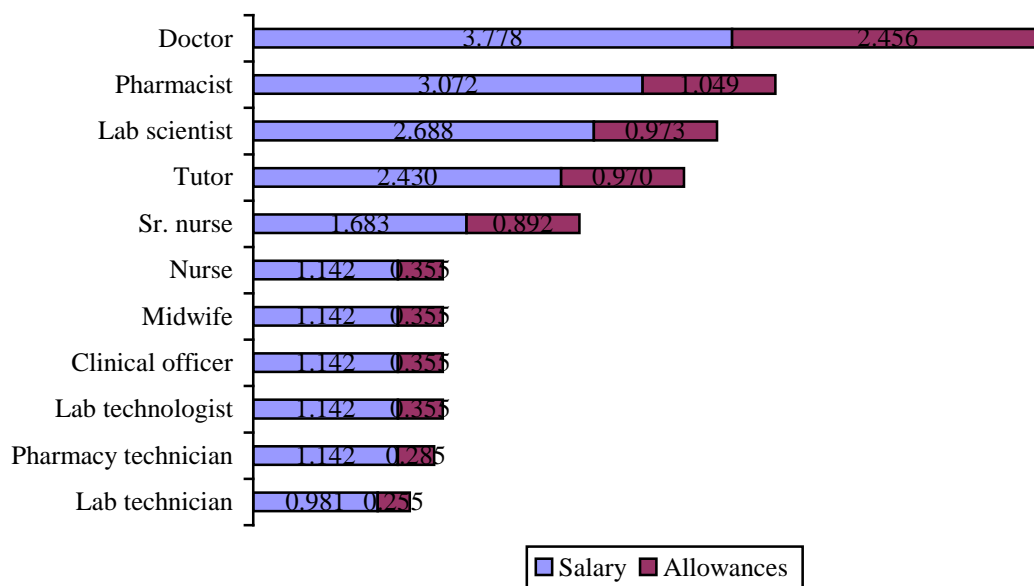
Note: Numbers in parentheses refer to the average amount of time, in hours, devoted to the activity.

- Non-medical/non-health enterprise inside the facility - Some 11 percent of staff engage in this type of activity, mostly in UHCs (where 25 percent of staff report doing it) and RHCs (6 percent). None of the hospital staff reported engaging in this type of activity. Staff resorting to these income-augmenting activities devote, on average, 6 hours to them.
- Other income-augmenting activities - The most popular income-augmenting activities are agricultural work (reported by 39 percent of staff) and trade (reported by 29 percent). Ten percent resort to teaching.

STAFF SALARY AND BENEFITS

18. *Salary levels of professional and clinical workers are highly compressed, and a variety of allowances are being used to decompress overall payroll.* The salary structure of professional and clinical health workers are highly compressed at the upper and middle levels. At the middle level, salaries are uniform across four different cadres (nurse to pharmacy technician). At the senior level, a nurse-tutor and a doctor's salary differs by a factor less than 1. To decompress the salary structure, a wide range of allowances has evolved, including housing, "on-call", recruitment and retention, commuted overtime, commuted night duty, and uniform upkeep. As shown in Figure 8, allowances already account for 39 percent of a doctor's and 35 percent of a senior nurse's monthly package. The number of these allowances tends to decline with the level of the health worker, although each type of allowance tends to be applied uniformly across levels, except for housing and recruitment and retention allowances.

Figure 8. Composite Monthly Salaries and Allowances (ZK Million) of Clinical/Professional Health Workers, 2005



19. *The cash allowances and in-kind benefits are varied but highly fragmented, and cater only to a small proportion of staff.* While cash allowances are of wide variety, these are nowhere near universally provided. Indeed, only a selected few, i.e., senior-level staff, receive the plum benefits (Table 7). Thus, only 3 percent of all staff surveyed receive salary top-ups; only 3 percent are eligible for the retention scheme; only 2 percent have educational allowances for their children; only 4 percent are provided transport allowance; and only 7 percent obtain food allowance. In effect, 93-97 percent of staff do not get these cash benefits, and deem them to be discriminatory. Even the more liberally-provided cash benefits are not for everybody. Housing allowance is received by less than half (44 percent) of staff; clothing allowance, by only 27 percent; "on-call" allowance, by 33 percent; and rural hardship allowance, by only 16 percent. Non-cash benefits such as schooling of children, food, and transport benefit at most 1-3 percent of staff. Among the wide array of benefits, only health services at the facility can be accessed by 85 percent of staff surveyed. And up to this time, GRZ employees, including health workers, still do not have medical insurance cover.

Table 7. Staff Cash Allowances and In-Kind Benefits Received, 2006

Staff Allowances	RHC		UHC		Hospital		All	
	% of staff who rec'd	Ave. amt. rec'd ZK1,000	% of staff who rec'd	Ave. amt. rec'd ZK1,000	% of staff who rec'd	Ave. amt. rec'd ZK1,000	% of staff who rec'd.	Ave. amt. rec'd ZK1,000
Cash Allowances								
Top-ups	1	256.7	2	159.6	1	424.0	4	255.9
Food	5	123.4	1	76.7	2	38.6	7	97.2
Clothing	11	38.9	9	59.6	7	79.5	27	56.9
Housing	9	142.6	20	162.1	15	199.9	44	171.2
Educational	0	-	1	307.6	1	125.0	2	246.8
Transport	2	152.6	1	148.7	1	358.7	4	212.5
Rural hard-ship	13	235.4	1	169.0	3	186.4	16	225.2
Retention scheme	1	25.0	1	20.0	1	155.0	3	89.0
MD on-call	11	48.4	9	49.9	13	229.1	33	120.8
Others	10	104.9	5	64.8	7	367.3	22	182.4
In-Kind Benefits								
Health service	31	-	30	-	24	-	85	-
Schooling	0	-	0	-	1	-	1	-
Housing & utilities	2	-	4	-	2	-	8	-
Food	1	-	0	-	0	-	1	-
Transport	1	-	1	-	1	-	3	-

20. *Managing the complicated cash and in-kind benefit system must be onerous.* The numerous benefits must be given individually to each eligible staff. Except for three allowances, namely housing, "on-call", and recruitment and retention, the other allowances and in-kind benefits are small in value. For instance, the commuted overtime is ZK40,000 (about US\$9), the commuted night duty is ZK30,000 (about US\$7), and the uniform upkeep is ZK35,000 (about US\$8). The administrative costs of providing these benefits are unknown, though they must be significant. More importantly, forecasting the budgetary requirements of this complicated staff benefit system would be extremely difficult as it would require checking each eligibility criterion for each type of benefit. The effect of this system on staff morale and on team camaraderie is also not known, although it appears rather inequitable. Finally, it is doubtful whether this is the best method of "decompressing" the overall salary and benefit structure.

SALARY MANAGEMENT

21. *Some staff experience delays in salaries, nonpayment of salaries, or less-than-full salaries. (See Table 8.)*

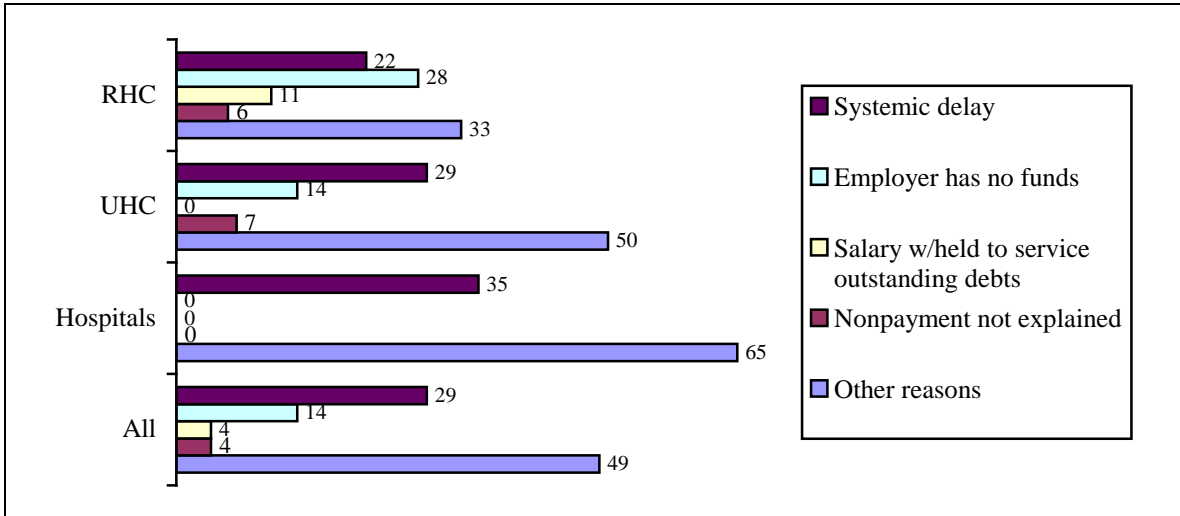
Table 8. Salary Management, 2006

Percent of Staff	RHC	UHC	Hospital	All
% who received all salaries due the past 12 months	85.4	87.7	82.3	85.4
% who did not receive all salaries due the past 12 months	14.6	12.3	17.8	14.6
Ave. no. of months not paid	4	3	5	5
% who received all salaries on time	28.7	16.7	19.8	21.9
% who experienced delays in receipt of salaries	71.3	83.1	80.2	78.1
Ave. no. of months delay	1	1	1	1
% who received salaries in cash	11	10	10	10
% who had salaries automatically deposited in the bank	88	90	90	90
% who received salaries by other method	1	0	0	0
% who received all salaries net payable	90.9	86.0	75.0	84.5
% who received less than net payable salary, without consent or understanding	9.1	14.0	25.0	15.5
Ave. amt. of salary missing (ZK)	72,444	239,133	244,278	189,015
% who recovered missing portion of salary	18	0	25	21
% who paid "expediter's fee" to obtain salary	6	8	13	10

- Some 85 percent of staff received all their salaries due for the past 12 months. However, about 15 percent did not get all their salaries, a higher percentage of them from hospitals. The unpaid salaries for these staff can be as high as 3-5 months.
- A wider problem is delay in the receipt of salaries. Only a little more than a fifth (21.9 percent) of staff received their salaries on time; most staff (78.1 percent) experienced delay of about 1 month. Among the reasons staff cited for nonpayment or delay of salaries are "systemic delays" (cited by 29 percent of staff who experienced delays) and "other reasons" (cited by 49 percent). (See Figure 9).
- Still other staff (15.5 percent) received an amount less than their net payable salary without their consent or understanding. This is highly prevalent in hospitals where 25 percent of staff who responded to the survey experienced this problem. The missing portion of salaries is not an insignificant amount: it averaged ZK189,015 among the staff in the different facilities, the missing amount rising with the level of the facility. Thus, although the missing salary

amount is rather small in an RHC (average of ZK72,444), it reaches an average of ZK244,278 in hospitals. About 21 percent of staff who experienced this problem reported that they eventually recovered the missing portion of their salary.

Figure 9. Reasons Cited by Health Staff for Delay or Nonpayment of Salaries, 2006



22. A tenth of the staff reported paying "expediter's fee" to obtain their salaries. While paying a facilitation fee to get one's salary is not common, it was reported by about a tenth of staff. Surprisingly, a greater percentage of those staff experiencing this problem comes from hospitals. One can surmise that this problem occurs among those staff who continue to receive salaries in cash (10 percent of staff) or other method, since the salaries of most staff (90 percent) are automatically deposited into their bank accounts.

CHAPTER 3 - CONCLUSIONS

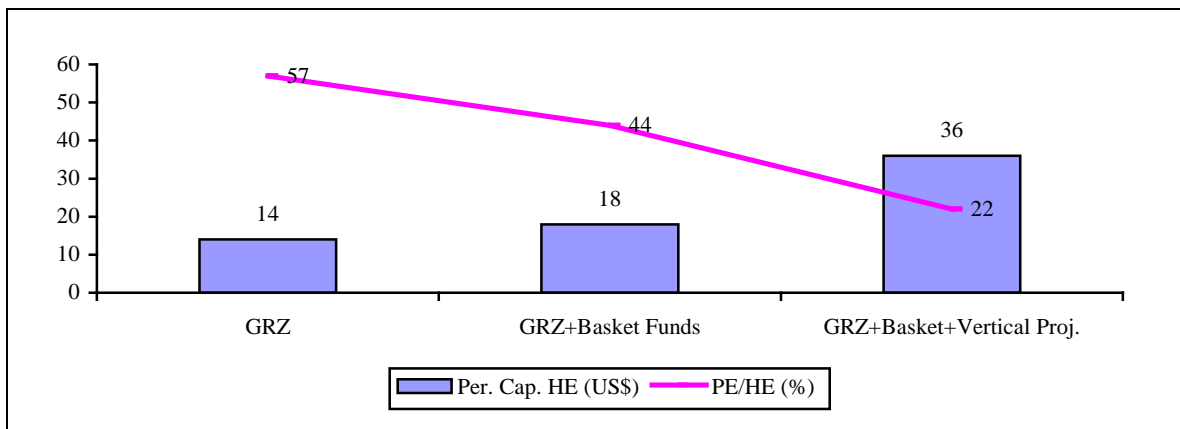
IMPLICATIONS OF THE STUDY

1. *The vacancy rates are undeniably high at 33.5 percent (it is even higher for professional staff at 41.4 percent), and the rapid staff turnover especially at RHCs has become untenable.* For this reason, the HRH Strategic Plan suggests a substantial increase in recruitment and in staffing establishments. As shown in this paper, however, skewed patterns continue to persist in existing established posts (e.g., the burden of having "in the books" so many low-skill posts in RHCs, and so many administrative posts in UHCs). The staffing pattern as reflected in these established posts need to be carefully reviewed before any large-scale recruitment. This is all the more important because as shown in the National Health Accounts analysis, MOH facilities are far more labor-intensive than either mission or for-profit facilities, even with the large shortage of MOH workers. Alternatively, MOH should set explicit criteria on the types of posts/cadres that should be filled or created as urgent, i.e., professional staff and critical administrative staff in rural areas. Failing to do so would result in bloated administrative and low-skill cadres (because they are easier to fill) even as professional staff may continue to be in short supply. It would also seem reasonable that, given the increasing share of health expenditures going to administration, central MOH Headquarters should receive less priority in recruitment.
2. *Paradoxically, the HR shortage is worsening at a time when the health sector is being flooded with donor resources.* The causes are well-understood in Zambia.
 - Firstly, vertical projects rarely, if ever, provide direct salary support. Belatedly, the Global Fund through Round IV has allowed the funding of health systems strengthening including human resource development. (Curiously, the Global Fund has funded NGO project staff from the very beginning, but not government staff.) Indeed, most of the other large vertical initiatives (e.g., the U.S. Government's PEPFAR) lie outside the purview of government, even though they involve the MOH service delivery system and rely on MOH health workers.
 - Secondly, the basket-funding cooperating partners still haven't created a fund to support personal emoluments directly.
 - Thirdly, MOH has been unable to adjust to the emerging era of budget support that could have increased the funding for human resources overall, preferring instead health-sector-specific support that it can control. Moreover, efforts in the

1990s to de-link health workers from the civil service so that they can be provided higher salaries failed.

- The combined result of these trends is depicted starkly for the year 2006 in Figure 10. As total per capita health expenditures increase with the addition of more funding into the health system, the proportion of PE to total health expenditures declines (even as the proportion of PE to MOH expenditures increases, as mentioned above). In short, it is the inability of the basket funds, health projects, and vertical financing to formally² finance PE that causes "so much money chasing so few workers". The imbalance in this factor ratio has not been properly analyzed.

Figure 10. Per Capita Health Expenditures (US\$) and Share of Personal Emoluments to Health Expenditures (%), 2006³

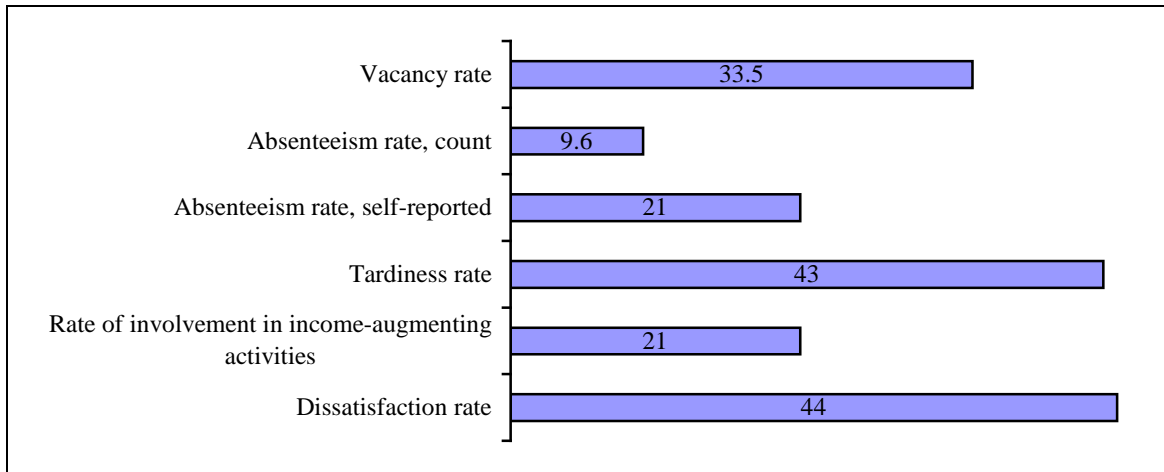


3. *Absenteeism and tardiness severely restrict the actual number of full-time equivalent ("real") workers, and these twin problems must be tackled head-on.* (See Figure 11). Human resource discussions in Zambia have overly focused on the need to fill vacancies, and have relegated the issue of staff absenteeism and tardiness to the background. The rates of absenteeism and tardiness derived from the PET/QSDS imply a total loss of 4,108 working days per month. Thus, if absenteeism and tardiness were fully eliminated, Zambia would gain virtually 187 full-time equivalent staff, enough to staff 2 hospitals, or 4 UHCs, or 21 RHCs. HR systems need to have a better handle on the problem, and how to deal with it.

² The word "formally" is important, because as was shown in the Public Expenditure Review chapter on "Budget Allocation, Release and Spending," vertical funds are being used by health facilities to incentivize health workers through one form or another.

³ The data and table are taken from Par Eriksson of SIDA who presented these data during the HR Roundtable in Zambia in 2006, held at the Swedish Embassy.

Figure 11. Summary Rates (%) of Staff Vacancy, Absenteeism, Tardiness, Involvement in Income-Augmenting Activities, and Dissatisfaction, 2006



4. *An overall wage strategy is needed.* The salary structure is highly compressed and although the allowance system has given a reprieve in decompressing such structure, it is not the best way of dealing with the problem. While the retention scheme was a right stop-gap measure at the beginning of the human resource crisis, it involved only a tiny minority of staff. The fragmented cash allowance and in-kind benefit system need to be consolidated. The wide variety of allowances and benefits only caters to a small segment of the health workforce, and it is difficult to forecast the budget implications of such a wide range of benefits.

5. *GRZ salary management needs to be strengthened.* The discrepancy in the number of filled posts, workers' payment of facilitation fees to receive salaries especially the 10 percent who continue to receive them in cash, delays in the receipt of salaries, and unexplained salary deductions in some workers call for a thorough review of the salary payment, and to plug the holes cited in this study.

KEY RECOMMENDATIONS

6. *Obtain national commitment to increase fungible (flexible) financing.* First of all, there must be recognition at the highest levels of Government that the health sector is in a state of crisis - the increasing flows of external assistance notwithstanding - and that the crisis must be dealt with in a coordinated manner. This requires closer dialogue between the Ministry of Finance and National Planning (MOFNP) and MOH that should result in stronger agreement on the level of spending that the sector needs over the medium term. MOFNP must recognize, first of all, that most of the donor financing are non-fungible, and therefore it cannot abdicate its duty of increasing the allocation to health. (The percentage share of Government health expenditures to total health expenditures has fallen from 7.7 percent in 1997 to 4.7 percent in 2004). Allowing non-fungible donor financing to increase while fungible government financing shrinks only results in further distortions in factor use (lack of funding for health workers, increasing administrative intensity, increasing off-budget financing - all classic symptoms of the imbalance between donor and domestic financing that were documented in the Zambia Public

Expenditure Review). The willingness of a few donors to convert their assistance from projects and basket funds to budget support, therefore, must be embraced by MOH as well (which has been hesitant so far), since this means that there will be more fungible financing available to the sector. But having more fungible financing also raises the challenge to the MOH to produce credible, financiable programs that MOFNP and the budget-supporting donors can fund.

7. *Formulate an overall wage strategy.* Because of its urgency, this should be top priority. The Strategic Plan for Human Resources for Health (2006-2011) has been approved, but the recurrent cost implications of it remain unfunded. The human resource crisis cannot be solved by incremental approaches, which is what the government and donors have done so far (through top-ups, implicit incentives, and a widening array of cash and in-kind benefits), and which have not yielded lasting solutions, given that the vacancies persist and staff turnover is increasing. Such a strategy must be informed by the ongoing HRH productivity study, as well as medium-term fiscal sustainability (forecasts of GDP growth and fiscal revenues).

8. *Improve payroll management.* Although salary management issues only involved 10-15 percent of surveyed health workers, these disgruntled civil servants could easily reduce overall morale. In any case, any form of "salary pinching" and delay cannot be allowed. Cash payments to workers should be eliminated as soon as feasible, and replaced with automatic bank deposits. If it does not yet exist, an administrative order against payment and receipt of expeditor's fees should be formulated and enforced.

9. *Enforce rules on absenteeism and tardiness, and provide better incentives for these two problems to be reduced.* These twin problems have been ignored as the government has focused almost solely on filling up posts, rather than managing those who are already in post. A renewed campaign for being on time and fulfilling 8 hours of official work is called for. The supervision teams, which visit facilities regularly and seem to do their work well, should be empowered to call to task staff who are out or late. As absenteeism and tardiness are intimately related to dual practice and other income-augmenting staff activities, a clear policy guideline to co-opt such coping behavior should be developed. Instead of off-site training, on-the-job skills acquisition should be pursued. Soft incentives (recognition, small-cash awards) should be provided for staff who register perfect or near-perfect attendance.

10. *Explore performance-based payment of staff as well as provision of institutional or team incentives.* It is difficult to enforce rules on absenteeism and tardiness without the requisite system support. Thus, using a Bundy clock to track staff absenteeism and tardiness is not a feasible solution in areas without electricity or battery needed to power the clock. And daily supervision is not feasible in distant clinics where staff are basically on their own. To address these constraints, one ought to work within the "self-selection" biases of staff. Since they cannot be observed close at hand and their time inputs cannot be monitored frequently, a more output-oriented approach should be explored, one that relies on their actual observable performance (which can be monitored by an outside agent from time to time) rather than their unobservable time inputs and personal efforts (which cannot be realistically monitored). Along the same lines, incentives should begin to focus more on teams rather than individuals.

FUTURE RESEARCH

11. *More quantitative analyses and modeling are needed to understand important health workforce behavior.* Due to time and resource constraints, this paper was only able to analyze ranges, averages, and proportions of key indicators of the state of the Zambian health workforce. However, the PET/QSDS provides a rich lode of data that can be mined to further analyze staff performance and behavior which, in turn, can provide stronger evidence on how health workers should be incentivized.

- Estimates and determinants of staff productivity - This study should analyze the input-mix of service provision. In addition, it should analyze the determinants of labor productivity (e.g., clients served per staff) vis-à-vis the level of effort of staff (total hours worked, and hours devoted to different activities), volume of services provided by the facility vis-à-vis number of staff by cadre, number of hours worked, number of hours and days the facility is open, frequency and types of supervision received, budget resources received, drugs and consumables available, state of infrastructure and equipment, and level of patient satisfaction.
- Determinants of staff tardiness and absenteeism - Among the factors that need to be analyzed are personal characteristics (age, marital status, number of years of schooling, cadre, etc.), level of effort of staff, residence of staff and distance to the health facility, staff availment of benefits (e.g., transport, housing), level of staff satisfaction or dissatisfaction, involvement in dual practice, and involvement in other income-augmenting activities.
- Determinants of staff engagement in dual practice and other economic activities - Among the factors that need to be analyzed are personal characteristics, level of effort of staff, residence of staff and distance to the health facility, staff's pay level, staff availment of benefits, level of staff satisfaction or dissatisfaction, and staff tardiness and absenteeism.
- Determinants of staff level of satisfaction or dissatisfaction - Among the factors that need to be analyzed are personal characteristics, level of effort of staff and hours worked, staff's pay level, staff availment of benefits, vacancy rates in the facility, the condition of the health facility, availability of utilities and basic equipment, availability of drugs and other medical supplies, volume of patients in the facility, level of patient satisfaction, frequency of supervision and types of supervision provided, and salary management issues.

12. *Conduct cross-country comparisons.* As the number of PETS and/or QSDS exercises grows, it should be possible to construct standardized data on key indicators of staff availability, behavior, and level of satisfaction, as well as human resource management systems issues so that countries can benchmark themselves against each other.

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This paper reports the findings of the Zambia PET/QSDS pertaining to human resources for health in Zambia. This paper argues that (i) High staff vacancies, especially of clinical workers are crippling hospital and clinic operations; (ii) Salaries are highly compressed, reducing their effectiveness in providing incentives. The paper recommends that the country obtain national commitment to increase fungible (flexible) financing to support health workforce improvement and incentives. The government should formulate an overall wage strategy, improve payroll management, and enforce rules on absenteeism and tardiness, and provide better incentives for these two problems to be reduced.

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