MINISTRY OF HEALTH

Human Resources for Health Information Update

- Geographical and Gender Distribution
- Staff Availability
- Training Data
- Retirement Projections

HUMAN RESOURCE FOR HEALTH DIVISION

JULY 2012

Cover Design

Abbreviations

AMO	Assistant Medical Officer
CMS	Central Medical Stores
CHN	Community Health Nurse
CHS	College of Health Sciences
DHMT	District Health Management Team
ENT	Ears, nose and throat
HRH	Human Resources for Health
HRIS	Human Resource Information System
MKUZA II	(Second Poverty Reduction Strategy for Zanzibar)
MMH	Mnazi Mmoja Hospital
MOH	Ministry of Health
NACTE	National Council for Technical Education
PHCC	Primary Health Care Centre
PHCU	Primary Health Care Unit
PHCU+	Primary Health Care Units selected to provide additional services
PHN 'B'	Public Health Nurse category B
PHN'A'	Public Health Nurse category A
PHL	Public Health Laboratory (Pemba)
RGoZ	Revolutionary Government of Zanzibar
WHO	World Health Organisation
WISN	Workload Indicator Staff Needs
ZMS	Zanzibar Medical School

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Introduction

This Human Resources Update is the first of a series of eight quarterly Human Resources for Health updates intended to provide up-to-date information on the Human Resources for Health situation in Zanzibar. Although the Training Plan for Health Facilities 2011-21 was developed in August 2011, staff availability changes over time and periodic updates are required for Human Resources management and planning.

The information is intended to support the following activities:

1. Development of the **Plan of Action** for the Human Resources Division, Training Unit, College of Health Sciences, District Health Management Teams, Programmes and Unit within the Ministry of Health that conduct activities at health facility level
2. Evidenced-based **deployment** of newly graduated health workers and staff returning from study leave
3. **Re- deployment** of staff between the Districts and hospitals
4. Decision-making for **funding** Human Resource activities (including training) by Development Partners
5. Development of the **Human Resources Strategic Plan**
6. Responses to **ad hoc enquiries** from Ministry of Health, RGoZ Ministries and Development Partners

In this June version the following information is provided:

- Section one: Geographical and Gender distribution of Ministry of Health staff
- Section two: Staff availability at each level of care
- Section three: Health workers under training (within and outside Zanzibar)
- Section four: Retirement projections

NB. In September update the following information will be provided a) revised staff establishment highlighting shortages at each level, b) recommendations of the deployment and national training committees c) updated training information and d) an analysis of salary expenditure

Methodology

The methods used to provide the information described in this Human Resources Update are described in the Training Plan for Health Facilities 2011-21 and the Training Plan for Central Level. The reader is referred to these documents for full details.

Section one: Geographical and Gender distribution of Ministry of Health staff

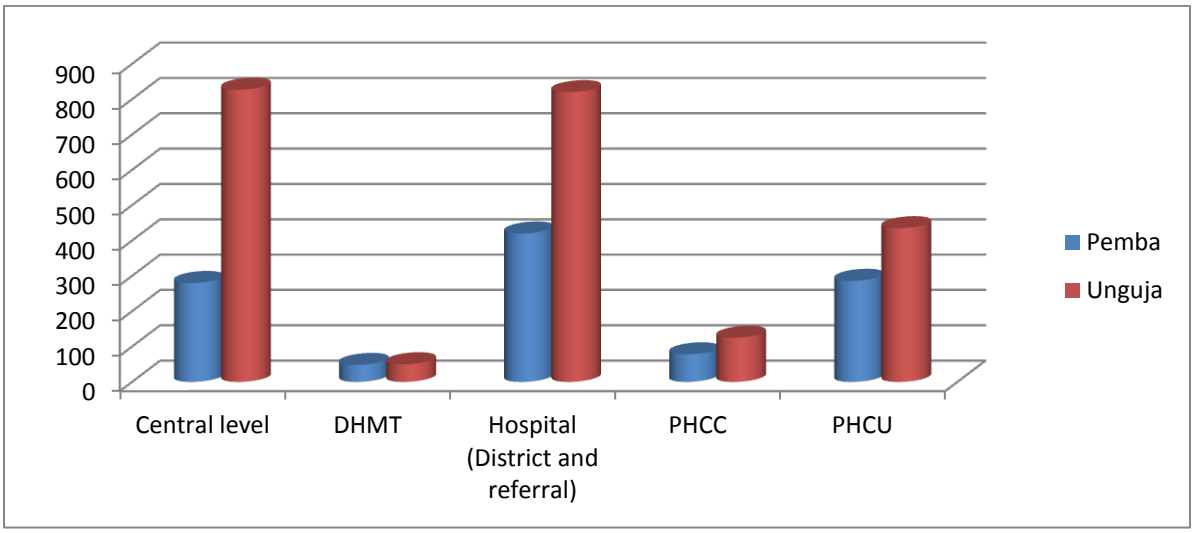
There are currently 3361 staff registered on the Human Resources for Health Information System (HRIS) and employed by the Ministry of Health who are active, on contract or on sick leave. In this section a breakdown of staff available at each level is presented by geographical location, by gender and level of service.

Geographical distribution

There is a marked difference in staff available in the two zones, Pemba and Unguja. Of the 3361 active staff (including those on contract and currently on sick leave) about one third (n=1104 -33%) are stationed on Pemba Island. However, activities such as policy and guideline development are carried out by staff employed at Central

level Ministry of Health are applicable to Pemba Island aswell as Unguja. The geographical Distribution of staff between the two islands is illustrated in Figure 1.

Figure 1 *Geographical Distribution of active employees by Zone (HRIS 30th June 2012)*



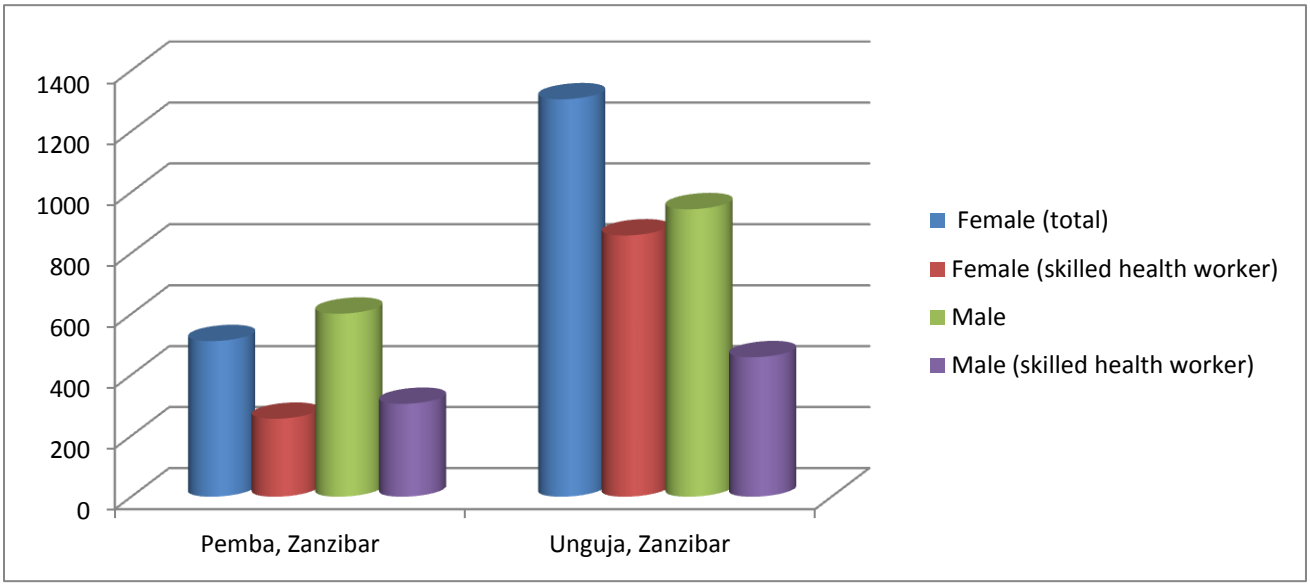
The staff at Central level Unguja also include staff working at the College of Health Sciences. Further analysis shows that only 30% health workers and 27% professional staff are stationed on Pemba (see Figure 2).

Figure 2 *Skilled non-health workers, skilled health workers and unskilled staff per Zone (HRIS June 30th 2012)*

Gender distribution

At present 55% health staff are professional staff providing direct patient services. The gender distribution falls in favour of females (54%) due to a higher proportion of female, professional workers on Unguja. By contrast there is a higher proportion of male health workers and support staff on Pemba Island (Figure 3).

Figure 3 *Gender distribution of total and skilled health workers by Zone (HRIS 30th June 2012)*



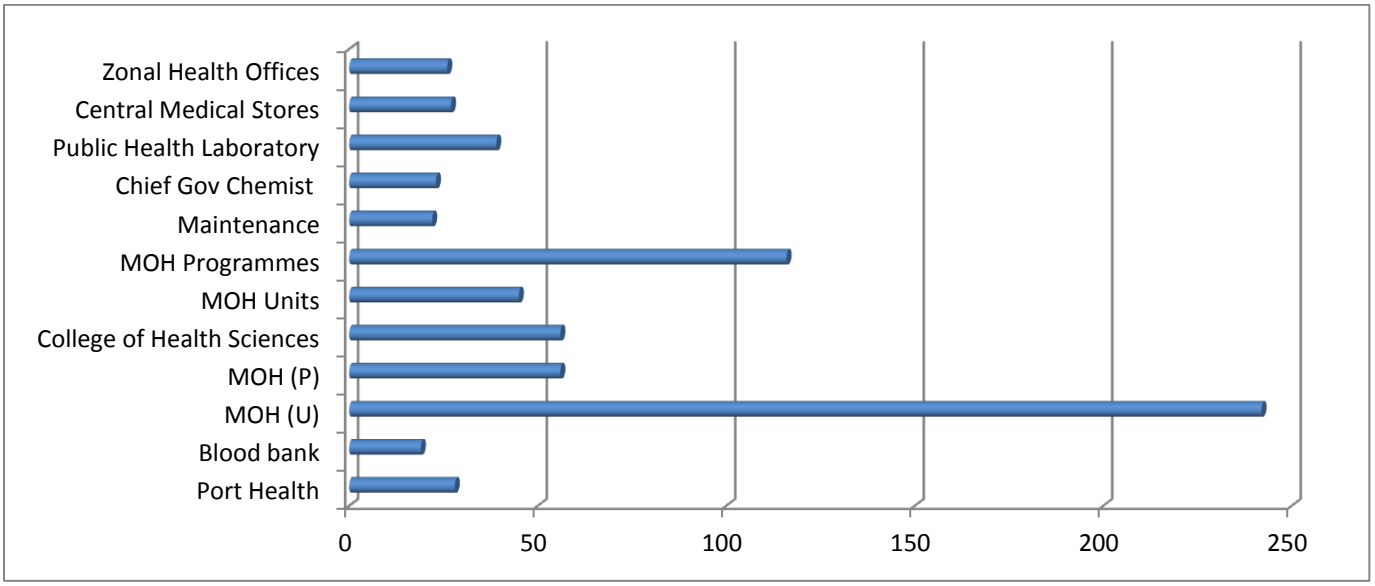
Section Two: Staff availability per level of care

The staff of the Ministry of Health is employed at all levels of the health system. At Central level 1099 staff were registered on the Human Resource Information System (HRIS) including Zonal Health Offices while within District Health Management Teams (DHMT) 98 staff are employed. Hospitals at District and Tertiary level employ 1240 staff and an additional 203 are posted to the Primary Health Care Units. The remaining 721 staff are posted in the Primary Health Care Units. The 'Manning Levels' or 'Staff Establishment' for each level are currently under revision and will be reported in the September 2012 Human Resource Data Update.

Central level

There are over a thousand Ministry of Health employees currently captured in the HRIS database at central level. A breakdown of the current distribution of these employees is presented in figure 4.

Figure 4 *Distribution of staff at Central level , Ministry of Health(HRIS 30th June 2012).*



District Health Management Teams

The District Health Management Teams (DHMTs) are responsible for the performance of the health facilities in their catchment areas. One of their roles is to ensure the facilities are fully equipped to provide the services set out in the Essential Health Care Package, including infrastructure, supplies and staff. The Zonal Health Officers oversee the functioning of the DHMTs. A breakdown of the staff at the ten DHMTs is presented in Table 1.

Table 1. *Breakdown of staff at DHMT per Zone (HRIS 30th June 2012)*

Category/Cadre	Unguja	Pemba	Total
Assistant Medical Officer	5	3	8
Clinical Officer/Community Health Nurse	4	0	4
Administrative/Secretarial	3	5	8
Driver	5	3	8
Orderly	4	5	9
Environmental Health Officer	16	15	31
Nurses	4	6	10
Pharmacy	4	4	8
Total	**44**	**41**	**85**

A review of the establishment of the DHMTs has commenced. The requirements of all programmes, including tasks and workload expected for the programme activities, for each cadre are being taken into consideration. The revised manning levels will be provided in the September HRH Update.

Primary Health Care Units and Primary Health Care Unit +

The number of Primary Health Care Units (PHCU) and PHCU+ remains unchanged since the development of the Training Plan. Table 2 shows the number of each facility per zone.

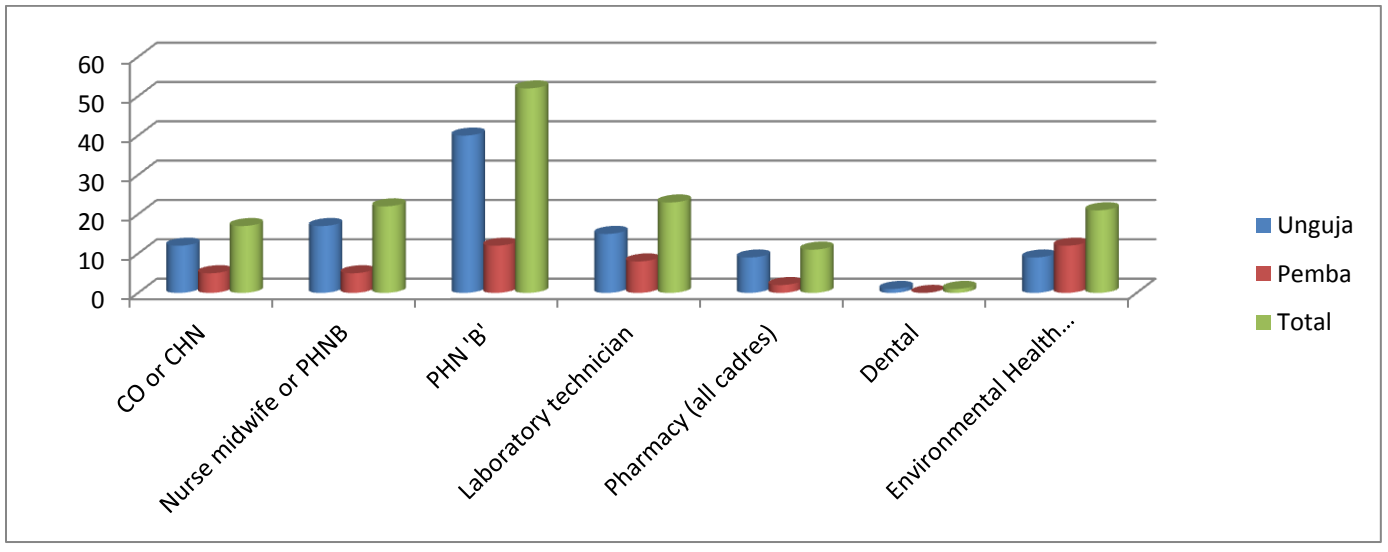
*Table 2. Categories of primary health facility by catchment population**

Category	Catchment population	Unguja PHCU	Pemba PHCU	Total	PHCU+
Extra high	>20,000	7	0	7	5
High	>10,000<20,000	10	18	28	9
Medium	6000-10,000	16	14	30	8
Low	<6000	47	25	72	12
(PHCU+)		(21)	(13)	(34)	(34)

**includes facilities attached to non-governmental institutions whose staff are included in the MOH workforce*

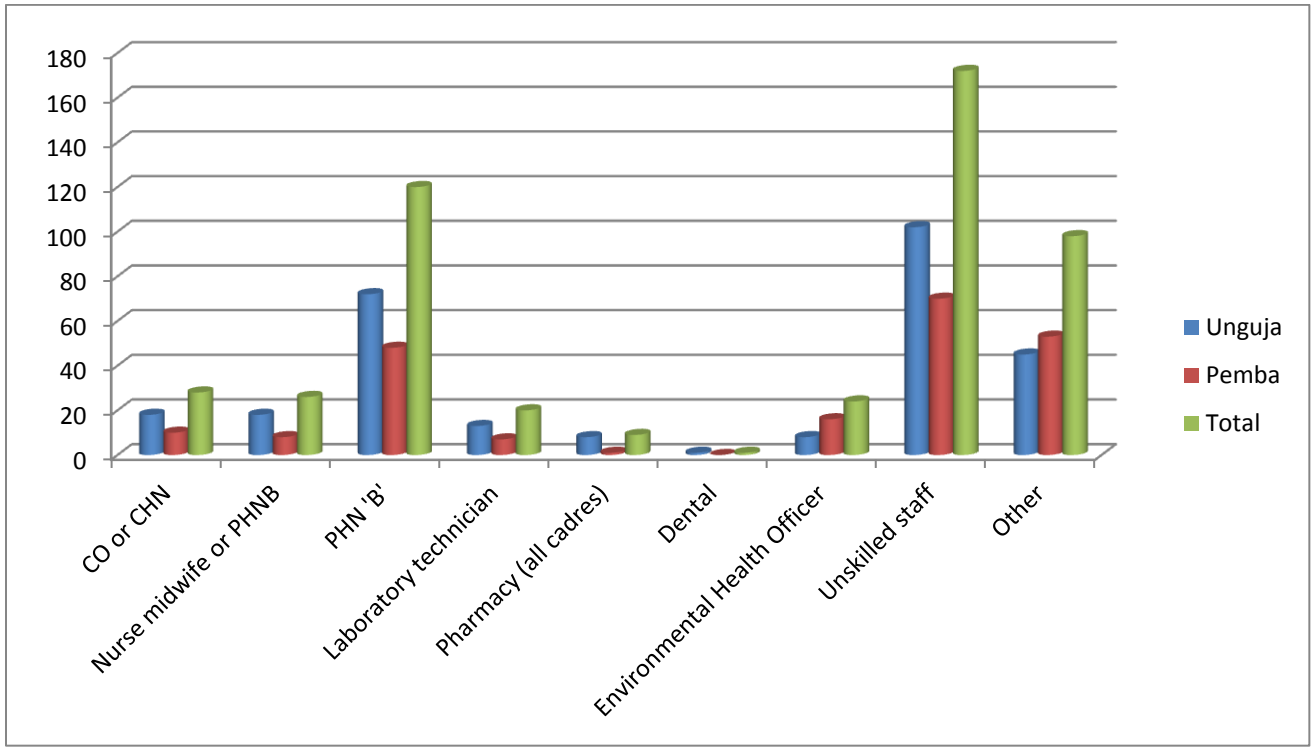
The minimum required staffing levels for each cadre for the PHCU are currently under revision. Information on staffing shortages using the HRIS data and the revised Minimum Staffing Requirements will be presented in the September 2012 Human Resource Data Update. The total number of staff in the PHCU+ is 95, of which 32 are posted in Pemba and 63 in Unguja. A breakdown of the staff at PHCU+ is shown in Figure 5.

Figure 5 *Staff availability in all PHCU+ in Unguja and Pemba by category (HRIS 30th June 2012)*



The total number of staff posted to PHCUs as reported in the HRIS are 498 of which 213 are based in Pemba and 285 on Unguja. A breakdown per category is presented in Figure 6.

Figure 6 *Staff availability in all PHCU in Unguja and Pemba by category (HRIS 30th June 2012)*



Primary Health Care Centres

There are four Primary Health Care Centres (PHCC) on Zanzibar, two on each island. There is an intention to upgrade these facilities to the level of District Hospital. The total number of staff available at these 'Cottage' hospitals is 198 of which 105 are skilled health workers. A breakdown of staff posted to each hospital is presented in Table 3.

Table 3 *Staff availability in Primary Health Care Centres (HRIS 30th June 2012)*

	Vitongoji	Micheweni	Kivunge	Makunduchi	TOTAL
Assistant Medical Officer				1	1
Clinical Officer	2	2	5	4	13
Nurse Midwife	3	6	15	4	28
Other nurses	7	4	6	7	24
Laboratory staff	2	3	4	4	13
Pharmacy staff	1	2	2	2	7
Dental staff			1	1	2
Environmental Health Officers			2	1	3
Radiographer	1			2	3
Other skilled	3	2	3	3	11
Orderly	11	15	19	14	59
Other non skilled support staff	8	9	6	11	34
TOTAL	38	43	63	54	198

District Hospitals

There are three District Hospitals, all based on Pemba Island. The total number of staff employed at these hospitals is 420. Chake Chake has the highest number of staff at 161, Wete has 143 and Mkoani (excluding foreign staff n=9) has 116 staff. The absence of Medical Doctors and Specialists based at Mkoani (Abdallah Mzee) Hospital is compensated by a large contingent of Chinese doctors that provide services on a two year rotational basis. A breakdown of staff currently employed at the District Hospitals is presented in Table 4.

Table 4. *Staff at District Hospitals by cadre (HRIS 30th June 2012).*

	Chake Chake	Mkoani	Wete	Total
Specialist	2		1	3
Medical Doctor			1	1
Assistant Medical Officer	3	3	2	8
Clinical Officer	4	1	5	10
Nurse Midwife	19	6	19	44
Other nurses	17	29	23	69
Laboratory staff	9	12	6	27
Pharmacy staff	4	4	5	13
Dental staff	1	0	1	2
Environmental Health Officers	0	0	1	1
Medical imaging	3	3	2	8
Physiotherapist	3	1	1	5
Other skilled	3	1	3	7
Orderly	55	39	55	149
Maintenance	6	4	0	10
Clerk	7	1	5	13
Driver	9	2	3	14
Other non skilled support staff	16	10	10	36
TOTAL	**161**	**116**	**143**	**420**

Mnazi Mmoja Hospital (including Mwembeladu Maternity and Mental Hospitals)

Mnazi Mmoja Hospital, including Mwembeladu Maternity Hospital and the Mental Hospital, employs a quarter of the Ministry of Health employees. The proportion of active skilled health workers or those on contract of the total number of staff (active or on contract) is 61%. A breakdown of staff availability is presented in Table 5 & 6.

Table 5. *Staff employed at Mnazi Mmoja Hospital by cadre/category of staff (HRIS June 30th 2012*)

Cadre	Number		Cadre	Number
Specialist	14		Occupational Therapist	1
Medical Doctor	12		Orthopaedic staff	4

Assistant Medical Officer	14		Other non-skilled support staff	18
Clinical Officer	22		Maintenance staff	17
Nurse Midwife	222		Clerk	26
Other nurses	78		Driver	11
Laboratory staff	68		Other skilled staff	29
Pharmacy staff	35		Orderly	227
Dental staff	8			
Environmental Health Officers	9			
Medical imaging	14			
TOTAL = 825				

Table 6. *Specialists and Nurses employed at Mnazi Mmoja Hospital (HRIS 30th June 2012)*

Specialists		Specialist (non Medical Doctor)		Nurses	
Cardiologist	1	Biochemist	1	Midwives	222
Paediatrician	2	Laboratory Scientist	1	Psychiatric	37
Gynaecology	1	Pharmacist	1	Anaesthnetist	7
Surgeon	1	Radiologist	1	Paediatric	2
Anaethnetist	1			Opthalmic	4
Opthalmic Surgeon	1			Occupational Health	3
Dentist	2			General	12
Pathologist	1			PHN 'B'	13
TOTAL	10	TOTAL	4	TOTAL	300

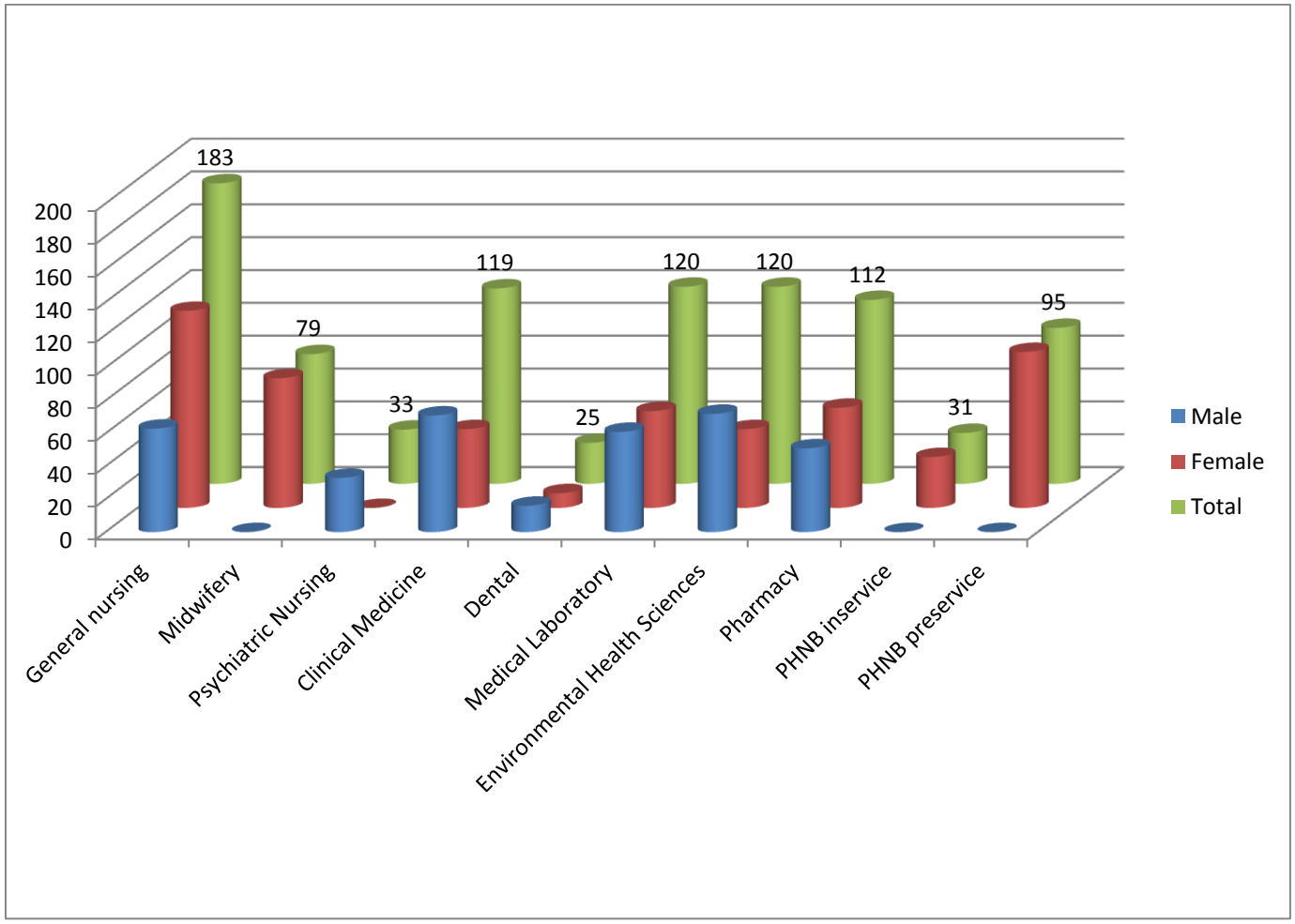
Section Three: Health workers under training (within and outside Zanzibar)

There are two training institutions for health workers on Zanzibar; College of Health Sciences and Zanzibar Medical School. The College of Health Sciences trains nurses to certificate and diploma level, Clinical Officers, Envirnomental Health Officers, Pharmacy and Laboratory Technicians to Diploma level. Zanzibar Medical School provides training towards Medical Degree at two campus, one of Unguja and one on Pemba. Details of the number of students at each training school are provided in this section. In addition to the training opportunities within these institutions the Ministry of Health supports the training of other cadres outside Zanzibar with support from Development Partners. Details of these courses and the level of study are also presented in this section.

College of Health Sciences –current students

There are currently 917 students at the College of Health Sciences of which 367 are male and 550 are female. Figure 7 presents the number of students training in each of the courses offered.

Figure 7. *Students at College of Health Sciences per cadre (2011-12)*



Certificate courses are two years in duration while diploma courses take a total of four years to complete. Table 7 shows the number of students per year at the College of Health Sciences.

Table 7. *Students enrolled at the College of Health Sciences per year of study and per course (excluding drop out)*

	1ST YEAR			2ND YEAR			3rd Year	4TH YEAR			TOTAL	
COURSE	**M**	**F**	**TOTAL**	**M**	**F**	**TOTAL**	**TOTAL**	**M**	**F**	**TOTAL**	**M**	**F**
NURSING	34	50	84	29	70	99	0	33	79	112	96	199
CLIN. MED	30	26	56	41	22	63	0	0	0	0	71	48
DENTAL	9	4	13	7	5	12	0	0	0	0	16	9
MED. LAB	26	23	49	43	41	84	0	0	0	0	69	64
ENV. H.S	37	12	49	35	36	71	0	0	0	0	72	48
PHARM	32	19	51	19	42	61	0	0	0	0	51	61
PHN'B' (Inserv)	0	31	31	0	0	0	0	0	0	0	0	31
PHN'B' (Preser)	0	20	20	0	75	75	0	0	0	0	0	95
TOTAL	**168**	**185**	**353**	**174**	**291**	**465**		**33**	**79**	**112**	**375**	**555**
GRAND TOTAL											**930**	

In the school year of 2011-12 the drop out of students reached 83. This is a rate of 18% with a range of 33% for Nursing Courses and 6% for Clinical Medicine and Dentistry. Table 8 presents the number of drop outs and the rate per course.

Table 8 *Drop out rates per course at College of Health Sciences for school year 2011-12 by January 2012.*

Course	Students enrolled 2011	Students in training January 2012	Drop out	Drop out rate
Nursing	147	99	48	33%
Clinical Officer/Dental	80	75	5	6%
Medical Laboratory	99	84	15	15%
Environmental	80	71	9	11%
Pharmacy	67	61	6	9%
Total	**473**	**390**	**83**	**18%**

Zanzibar Medical School- current students

At the Zanzibar Medical School there have been two intakes to date, one on Unguja and one on Pemba. Currently there are 38 students enrolled in the Unjuga campus and 12 students enrolled in the Pemba campus. These students are taught by a total of 13 full-time lecturers, ten on Unguja and three on Pemba. The projected number of students is expected to peak at 90 in the academic year of 2014-15 (Table 9)

Table 9. *Enrollment forecast for medical students at the Zanzibar Medical School*

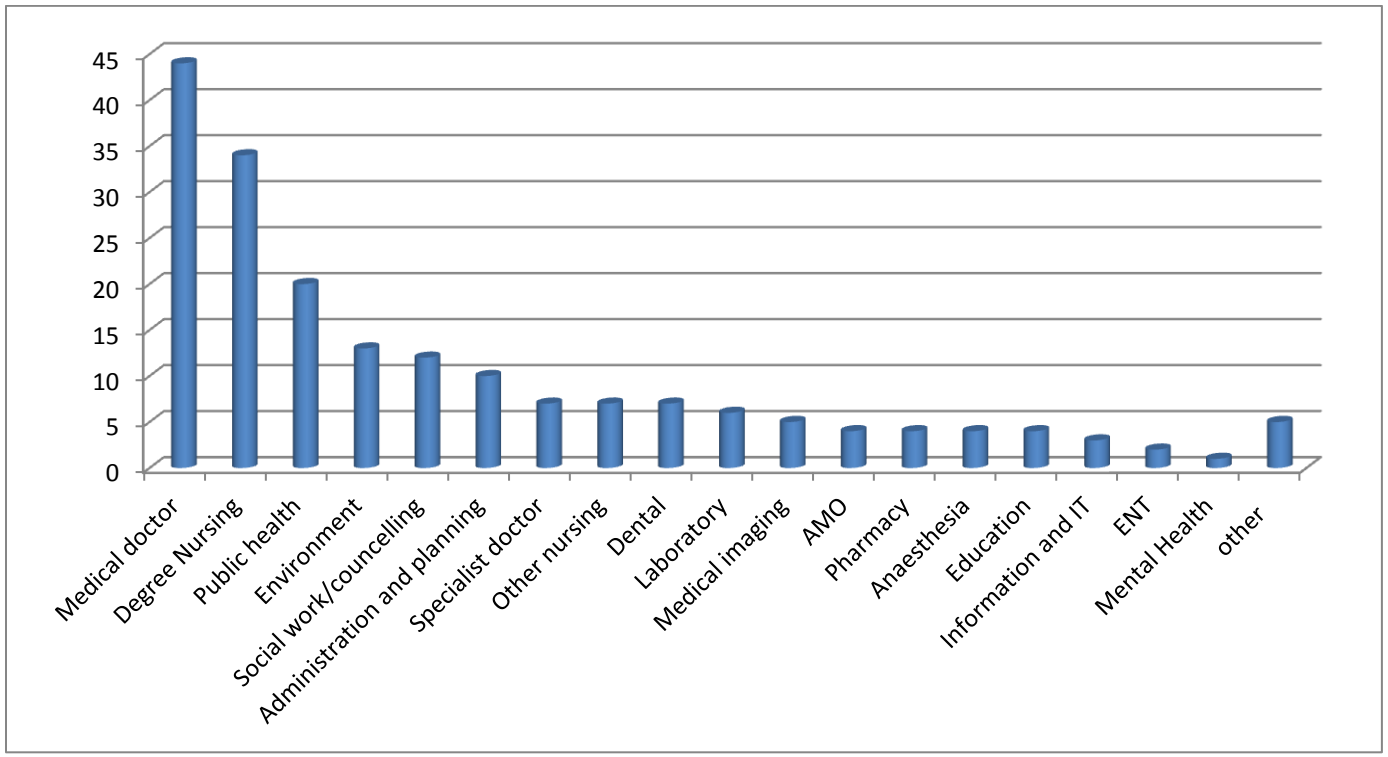
Courses	Academic Years							Total
	0	1	2	3	4	5	6	
2010-11		12		38				50
2011-12	20		12		38			70
2012-13		20		12		38		70
2014-15	20		20		12		38	90
2015-16		20		20		12		52

Source: Zanzibar Medical School Strategic Plan

Training outside Zanzibar

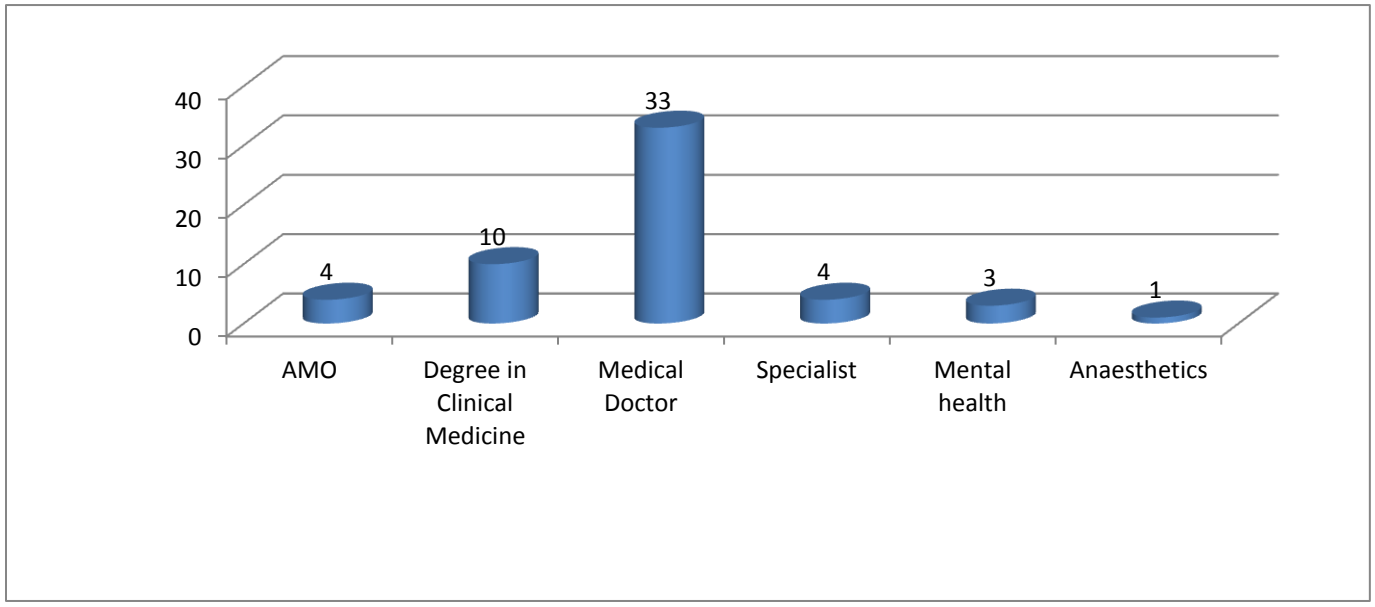
To supplement the training within Zanzibar a total of 211 staff members are currently on training outside Zanzibar in courses varying from Medical and Nursing courses, paramedics and administration, planning and social work. A breakdown of the courses is presented in Figure 8. All students on study leave, including those who are sponsored and self funded, continue to receive their full salary. The main sponsor is DANIDA covering the costs in full or partially of 55.5% students. Other sponsors include Italian Corporation and African Development Bank.

Figure 8. *Breakdown of courses being followed by Zanzibar health workers outside Zanzibar*.



Specialists include Obstetrics and Gynaecology, Infectious Diseases, Urology, Psychiatry and Surgery. A breakdown of students following medical related courses is found in figure 9.

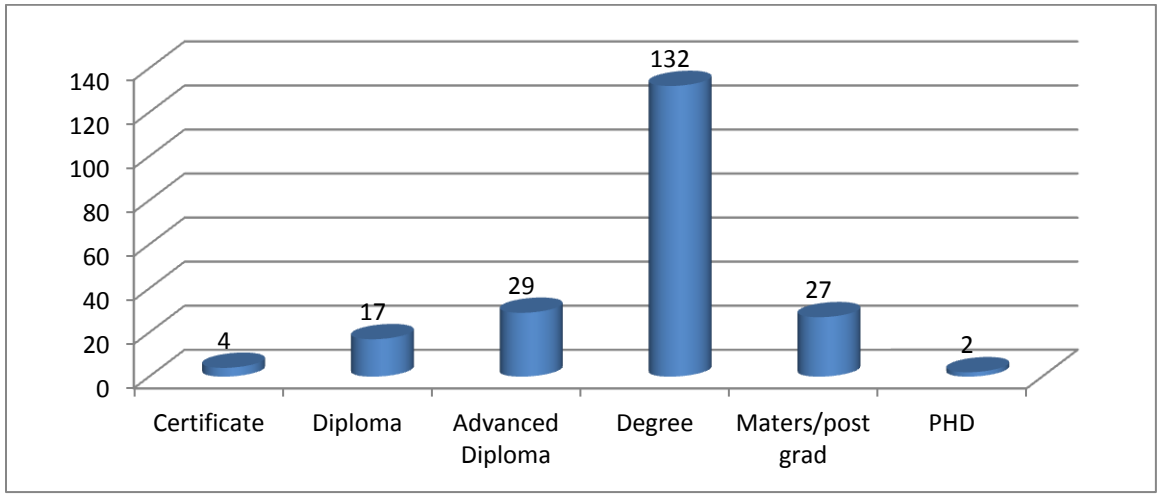
Figure 9. *Training outside Zanzibar for medical professions*



In addition to the 34 Degree Nurses still under training other nurses are taking basic diploma, Community Health Nursing, Anaesthetic Nursing, Critical Care and Paediatric Nursing.

The level of education of courses currently undertaken outside Zanzibar reflects the lack of training opportunities above diploma level within the islands. This is illustrated in figure 10.

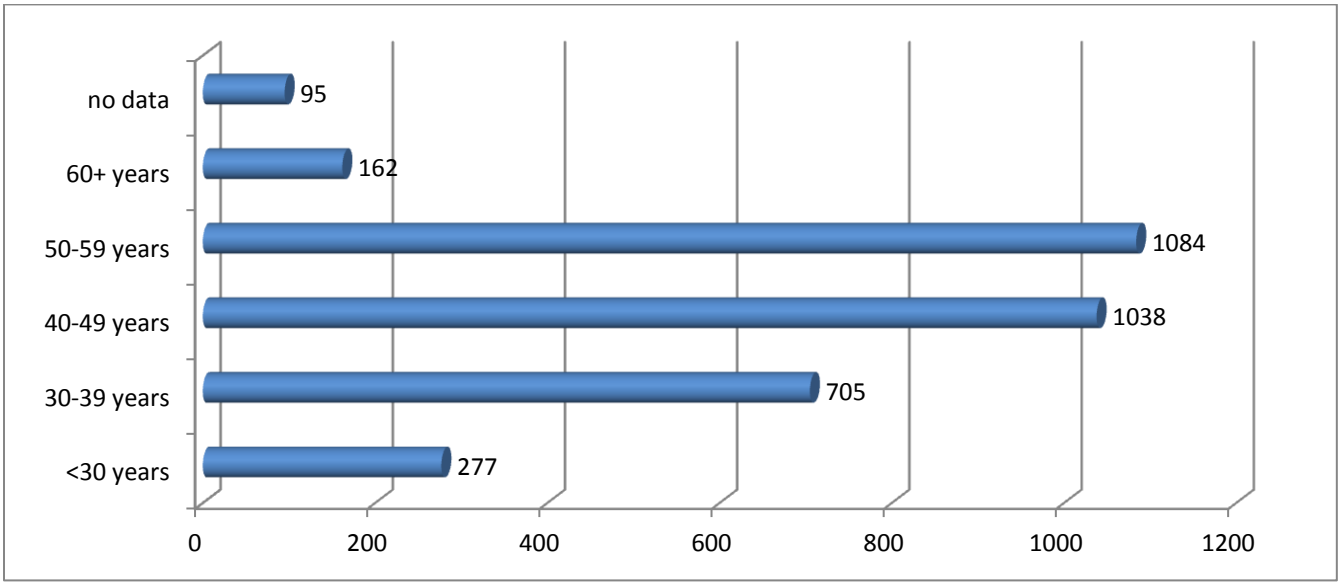
Figure 10 *Level of education- courses pursued outside Zanzibar by Ministry of Health staff.*



Section Four: Retirement projections

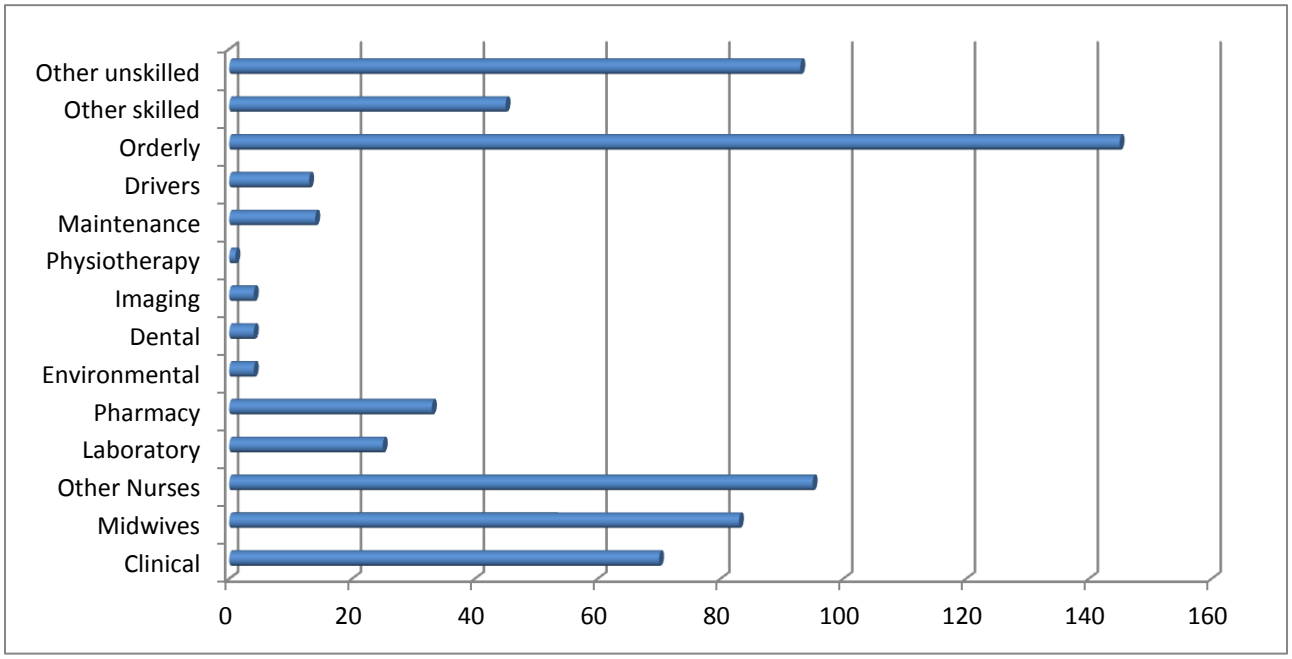
There are a total of 1246 Ministry of Health staff who are currently active, on contract or on sick leave who are due to retire in next five years. Of these 629 will retire in the coming five years. Data is unavailable for 96 employees. Figure 11 presents a breakdown of Ministry of Health staff, currently active, on contract or on sick leave per age group as reported in the HRIS.

Figure 11. *Breakdown of Ministry of Health staff per age group (HRIS June 30th 2012)*



Retirement is the most predictable of all reasons for attrition although early retirement and continuation of work through fixed term contracts leaves some deviance from the cut off age of retirement of 60 for both men and women. A retirement forecast is available for the next ten years for all key professional cadres and is available on request. A summary of the retirement projections for key staff categories is found in Figure 12.

Figure 12. *Health workers by category aged 55 or above (HRIS 30th June 2012)*



Cadres within the categories of nurses and clinical make up the highest proportion of staff who are pending retirement in the next five to ten years. A breakdown summary (Table 10) illustrates that 95 nurses and 39 clinical officers will have to be replaced by newly trained or recruited staff in the next five years. Training for replacement should begin in time to ensure there are no gaps in service provision.

Table 10 Breakdown of professional staff and nursing staff eligible for retirement in the next 5 years.

Clinical Cadre	Due for Retirement	Currently on Training
Specialists	6	4
Medical Doctor	4	46
AMO	6	4
Clinical Officer	39	75
CHN	15	1
Total	**70**	

Nursing Cadre	Due for Retirement	Currently on Training
Matron	2	43 (BSN)
Com. Health Nurse	15	1
Nurse Midwife	83	295
Nurse Psychiatrist	33	
General Nurses	37	
PHN 'A'	3	1
PHN 'B'	8	126
Nurse tutor	3	3
Nurse Anaesthesia	3	4
Nurse Paediatric	2	1
Nurse Occ Health	1	1
Nurse Opthalmic	3	0
Total	**95**	

Acknowledgements and Responsible Officers

This Human Resources for Health Update uses data from four sources; Human Resources Information System (HRIS) 30th June 2012; Training Database (July 28th 2012); College of Health Sciences Strategic Plan and Zanzibar Medical School Strategic Plan.

The officers contributing to this update are those who are responsible for the collection and entry of data on Human Resources for each of these sources. In particular the input from Mohammed Habib and Suleiman Ally for HRIS technical support and management and all Data Managers at hospital and district level and the Personnel Department for Human Resources data entry. The dedication to their duties is reflected in the degree of accuracy of the data in this update.

Dr Hakim, Rukia Bakar and Wendy Buckley supplied information from the College of Health Sciences and the Zanzibar Medical School and Directorate of Clinical Services provided their student information.