NHSSP

Ministry of Health & Population

Human Resources for Health Nepal Country Profile

HRH Technical Working Group

A. INTRODUCTION

The availability of adequate numbers of skilled human resources is the most critical constraint for achieving the Millennium Development Goals for health and other health indicators and targets. In 2011, Nepal's Ministry of Health and Population (MoHP) developed its Human Resources for Health (HRH) Strategic Plan (2011–2015). The development of this plan was challenged by a lack of accurate and up-to-date information on the number, characteristics and distribution of Nepal's health workforce. In 2012 and 2013, MoHP, in collaboration with the World Health Organisation (WHO) and the Nepal Health Sector Support Programme (NHSSP), therefore undertook an HRH assessment of the health workforce to enable the development of a HRH profile. A core technical team (CTT) from MoHP, WHO and NHSSP supported external consultants to produce this profile.

This Human Resources for Health Nepal Country Profile is based on data on Nepal's health workforce at all public sector hospitals with 15 beds and above; all sub-district level health facilities and all private hospitals and non-governmental organisation-run hospitals and facilities. Information was also gathered on health training institutions and number of trainees.

The large number and wide variety of documented post titles in Nepal's health service were mapped onto WHO's HRH classifications and aggregated using the WHO definitions. The public and private health workforce was then grouped into 12 broad categories.

B. FINDINGS

The stock of health workers — The assessment identified 54,177 health workers across the public and private health sectors. The health management and support staff group (20,396) was the largest group followed by the paramedical practitioners group (9,839). Doctors made up 12% of the private health sector workforce, 5% of the public health workforce and 8% of the total.

A total of 32,809 public health sector workers were identified, with the health management and support staff group (cleaners, ward helpers, and other non-clinical support workers) the largest group (33%) followed by paramedical practitioners (26%). A total of 21,368 health workers were documented in the private health sector with the largest group being nursing professionals. Sixty percent of all doctors and 80% of all pharmacists were employed in the private health workforce.

Many fewer paramedical practitioners were working in the private sector (1,160) than in the public sector (8,679). However, 80% of pharmacists, 75% of dentists and 60% of doctors were working in the private sector. Of the 2,642 doctors employed in the private sector, approximately 60% were working less than 48 hours, indicating that they were working in both sectors.

Ratio of selected staff to population ratios — Nepal was found to have 0.17 doctors per 1,000/population and 0.50 nurses per 1,000/population. This represents 0.67 doctors and nurses per 1,000/population, which is significantly less than the WHO recommendation of 2.3 doctors, nurses and midwives per 1,000/population.

Health worker registration — In spite of the Nepal Medical Council registering over 1,000 doctors per year, continuing shortages of doctors and specialists are reported in the public sector. The identified

gap between annual registrations and the numbers employed suggests that a significant number may be working outside the health sector or in other countries.

Gender distribution by health occupation/cadre — 46% of the workforce in the public and private sectors combined and 40% of employees in the public sector were female. Most of the females were in the two nursing categories. In all other groups (except dentists) the large majority of the workforce was male.

Age distribution by occupation/cadre — Only 13% of the public health workforce for which age data were available was aged 30 years or below. This could be partly explained by the freeze on recruitment over the past few years. A high proportion (23%) of the public workforce were aged 51 years and over and will be approaching retirement age in the next 10 years. The low number of younger nursing professional associates and paramedical practitioners is of concern as they provide services at the levels closest to the rural communities where so many Nepalese live.

Many specialist medical practitioners were 51 years of age or older (101 out of 249). Their aging may result in insufficient numbers being available to replace those who will retire or leave in the next 10 years.

The private health workforce was found to be younger than the public sector workforce, with 78% under 40 years, and only 7% of 51 years or more. A similar situation is reflected for nursing professionals in the private sector where the majority (84%) were 30 years or younger.

Distribution by cadre and region — The public health workforce was quite well distributed across the five development regions in relation to population, except for the higher proportion in the central region (due to large number of higher level hospitals there). For the private sector workforce, the Eastern, Western and Far Western regions had relatively fewer private health workers in relation to their populations.

Distribution of public health workers by facility — Health posts and sub-health posts had the largest number of public health workers at 12,884 (39%), followed by the central level hospitals, which had 7,386 (23%) of this workforce. Of all doctors in the public health workforce, 76% (484) were located in the central hospitals and 9% in district hospitals.

Distribution by ecological zone — The Terai zone had only 36% of health workers when it accounted for 50% of the country's population in 2011. Sixty-six percent of all doctors and 58% of all nurses were located in the hills — partly explained by central level hospitals being in the Kathmandu valley, which is in the hills.

Types of employment — The majority of public health workers were permanent employees (82%) while 13% were employed on contract. Most staff (96%) in PHCCs, health posts and SHPs were permanent employees. Only 44% of the workforce in private health facilities comprised permanent employees while 36% were employed on contracts.

Absence of health workers — The majority of the health workforce was available in facilities at the time of the assessment. The regional hospitals and Ayurvedic facilities had the most staff absent (4%). The main cause of absence from facilities was leave (43% of all absences).

Caste and ethnic identity — Sixty-three percent of the workforce were hill Brahmins, Chhetris and Newars — Nepal's relatively most advantaged groups.

HRH production — One hundred and ninety-six training institutions were providing proficiency certificate level training courses for health workers. Only 19% of the courses were provided by government-owned institutions. A large number of the paramedical (83% of courses) and nurse (67%) training courses were provided by not-for-profit institutions.

Nepal's health training institutions are producing a large number of health workers annually with approximately 10,000 graduating each year. Between 2009 and 2011 over 32,000 health workers were produced. The current and future supply from training should be sufficient to meet health services delivery needs, as long as they can be attracted and retained within Nepal's health sector. Several training courses were under-subscribed.

The SBA training for medical doctors, nurses and ANMs accounted for 27% of all in-service and continuous education trainees in 2012/13. A high proportion (55%) of total trainees was trained on safe delivery, maternal and reproductive health subjects (1,839/3,318) in 2012/13.

CONTENTS

AHW   auxiliary health worker
ANM   auxiliary nurse midwife
BDS   bachelor of dentistry
BPKIHS   BP Koirala Institute of Health Science
CMA   Community medical assistant
CTEVT   Centre for Technical Education and Vocational Training
DHO   district health office
DPHO   district public health office
ENT   ear, nose and throat
HERD   Health Research and Social Development Forum
HIIS   Health Infrastructure Information System
HRH   human resources for health
HuRIS   Human Resources Information System
HW   health workers
MBBS   bachelor of medicine and bachelor of surgery
MCHW   mother and child health workers
MoHP   Ministry of Health and Population
na   not available
NHSP   Nepal Health Sector Programme
NHSSP   Nepal Health Sector Support Programme
NPR   Nepalese rupee
PCL   proficiency certificate level
PHCC   primary health care centre
PIS   Personnel Information System
SHP   sub-health post
SOLID Nepal Society for Local Integrated Development Nepal
TSLC   technical school leaving certificate
TU IOM   Tribhuvan University Institute of Medicine
WHO   World Health Organisation

1 *INTRODUCTION*

Human resources represent the most critical constraint for achieving the Millennium Development Goals (MDGs) for health and other national health indicators and targets. Therefore, health planners and decision-makers must be able to understand and analyse the stock, distribution and characteristics of the health workforce. This information can then be used for:

- workforce planning;
- human resources management (e.g. recruitment, deployment, and performance management);
- human resource development (e.g. education, in-service training and professional development); and
- to support the implementation and monitoring of human resource polices and plans.

In 2011 Nepal's Ministry of Health and Population (MoHP) developed the 2011–2015 HRH Strategic Plan (MoHP 2011a). This plan aims:

> *"to ensure the equitable distribution of appropriately skilled human resources for health (HRH) to support the achievement of health outcomes in Nepal and in particular the implementation of the Nepal Health Sector Programme."*

The HRH Strategic Plan (2011-2015) contains a range of strategies and activities to achieve this aim and the following planned outputs:

- appropriate supply of health workers for labour market needs;
- equitable distribution of health workers;
- improved health worker performance; and
- effective and coordinated human resource planning, management and development across the health sector.

1.1 BACKGROUND

The development of the HRH Strategic Plan 2011-2015 was challenged by a lack of accurate and up-to-date information on the number, characteristics and distribution of the health workforce in both the public and private health sectors. A number of data sources were reviewed and appraised including MoHP's Human Resources Information System (HuRIS), the Ministry of General Administration's Personnel Information System (PIS), and the databases of the health professional councils. But the data available were inconsistent, incomplete and fragmented and not suitable for establishing a profile of the health workforce that could be used as a basis for workforce planning and for improving the management and development of the health workforce (Blair 2011). In addition the lack of standardised job classifications and health worker categorisations made it difficult to plan and monitor staffing levels and trends over time.

At that time MoHP acknowledged that more comprehensive human resource data were needed for workforce planning, to inform human resource policy and plans and to enable it to implement and monitor the strategic plan. To address this constraint, strategies and activities were included

in the plan aimed at improving the availability, quality and use of human resource data for developing a sector wide human resource profile.

To achieve these objectives MoHP, in collaboration with the World Health Organisation (WHO) and the Nepal Health Sector Support Programme (NHSSP), undertook an HRH assessment in 2012 and 2013 that collected data on the public and private health workforce to enable the development of a sector-wide HRH profile. A core technical team (CTT) made up of representatives from MoHP, WHO and NHSSP was formed to support external consultants with planning, designing and implementing the assessment and the development of the profile.

1.2 PURPOSE OF THE ASSESSMENT

The overall purpose of the HRH assessment was to collect and process data on the stock, characteristics and distribution of the public and private health workforce in Nepal and produce a sector-wide HRH profile that could be used to develop a health workforce plan and projections as well as inform strategies and approaches for the overall management and development of the health workforce.

1.3 METHODOLOGY

1.3.1 *Sampling*

MoHP decided to it needed to have as large a sample as possible. The following sample was used for identifying the public and private health workforces:

- All public sector hospitals with 15 beds and above including 62 district hospitals, 13 zonal and 5 regional hospitals, as well as 4 army, police and civil service hospitals were surveyed.

- All 75 district health office/district public health offices (DHOs/DPHOs) to obtain data on the health workforce in all public health facilities at sub-district levels including in all primary health care centres (PHCCs), health posts and sub-health posts (SHP).

- All private hospitals and non-governmental organisation (NGO) hospitals and facilities, (estimated in 2012 at 250 in number), including private pharmacies, laboratories and clinics in close proximity to the facilities were surveyed.

- Health training institutions in close proximity to the private and public health facilities were surveyed.

A sample of 4 PHCCs, 18 health posts and 78 SHPs from 15 districts across Nepal's three ecological zones (the Terai southern plains, hills and mountains) and five development regions was surveyed to validate the DHO/DPHO data. Districts included in the 2011 Service Tracking Survey and other recent surveys were *not* included in the sample.

The methodology included strategies to ensure access to private health sector data and to avoid double-counting and/or the duplication of data as a result of dual working and the multiple employment of staff.

1.3.2 *Data sources*

A rapid appraisal of four potential data sources – HURIS, PIS, regional health directorates and DHOs/DPHOs, was conducted to select the most reliable sources of human resource data on the

health workforce in the sub-district facilities. Based on the findings of this appraisal, DHOs/DPHOs were selected as the most comprehensive and reliable source of data as they maintain manual and/or computer-based personnel records of all public sector health workers in their districts.

The facility inventory developed by NHSSP in 2012 — the Health Infrastructure Inventory System (HIIS) (MoHP 2013a) was used to confirm the number, location and type of government facilities and to identify the sample of districts and facilities to use to verify sub-district facilities. The consultants developed an inventory of the private health facilities based on available information and stakeholder consultations.

1.3.3   *Data collection instruments*

Three sets of tools were developed for the following purposes:

1. To generate an inventory of health service delivery facilities and training/teaching institutions across the public and private sectors.

2. To assess the current stock, distribution and characteristics of the public and private health workforce and collect the following details on each health worker:
   - Name and employee ID number
   - Date of birth
   - Sex
   - Ethnicity/caste
   - Job details: cadre, job title, grade, level
   - Date of joining the service and start date in the facility
   - Name and location of previous workplace and duration of employment
   - Type of employment — permanent/sanctioned, contract, deputed
   - Workplace by facility type and location, district and region.

3. To collect HRH training and production information from the institutions producing health workers.

The results and findings of the piloting of these tools were presented at a national stakeholder workshop in November 2012. Stakeholder feedback was used to refine the tools as well as the overall methodology. Data were collected and processed between November 2012 and April 2013. The data were further cleaned and sorted between May and July 2013 and the results are presented in Section 2 of this report.

2 *FINDINGS*

2.1 INTRODUCTION

This section presents the information that was collected on the current stock, distribution and key characteristics of the public and private health workforce through the 2012 MoHP HRH Assessment.

This assessment identified approximately 54,177 health workers[1], with 32,809 in the public sector and 21,368 in the private sector. This information was collected from 112 public sector facilities at central (16 facilities), regional and sub-regional (5 facilities), zonal (10 facilities) and district (81 facilities and offices) levels from all Nepal's 75 districts. In addition, data on the private sector workforce were collected from 241 private facilities, of which 191 (79%) were private-for-profit and 50 (21%) were private not-for-profit, across 46 districts in the five regions.

Attempts were made to avoid double counting by recording an ID number (e.g. HuRIS ID, staff sheet roll number or council registration number) for each health worker. But a sufficient level of matching was not possible due to incomplete records and there is therefore a possibility of some double counting in the data.

The government has 417 sanctioned post titles and 31 occupation groups in the health sector (GoN 2012).

Most of the jobs are located between workforce levels 4 and 11. The majority of the groups are categorised by the type of specialty or expertise required for the job, with the exception of the miscellaneous category, which includes a mix of clinical, support, management and administrative staff. The majority of the public health workforce is governed by the Health Service Act, 1997/98; but a significant number of staff, mainly administrative and management staff, are deployed to the public health sector and are governed by the Civil Service Act, 1993.

Private health sector cadres vary based on the type of institution and organisation employing them; but have functions and staff groups and roles similar to those in the public health sector. These comprise a management group, a health professionals group, as well as mid-level and support staff. The key difference is that health workers employed in the private sector may have retired from the public sector, work less than full-time hours and may be employed in the private and public sector at the same time.

A large number and wide variety of post titles were documented through the HRH Assessment, some of which did not match the 417 official posts titles. Following this, all of the post titles identified were mapped onto the WHO classifications and aggregated using the WHO definitions (AHWO 2009) and educational levels documented through the HRH Assessment. The public and private health workforce was then grouped into the 12 broad categories used in the tables below. Annex 1 of this report shows the health worker cadres included in the categories.

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[1] Note that some of the health workers identified may not be working as 'Full Time Equivalents', but have jobs in both the public and the private sector simultaneously.

2.2 THE STOCK OF HEALTH WORKERS

The HRH Assessment data included approximately 2,100 (4%) health workers where no occupation was specified and/or documented in the public and private sector (these are shown as 'unclassified' in Table 1 and other tables). One-third of these were from the army and armed police sections of the public sector.

Across the public and private sectors, the health management and support staff group (20,396) was the largest group, followed by the paramedical practitioner group (9,839) and the nursing professionals group (7,054).

Doctors, including specialists and generalists, made up 8% of the total public and private workforce. They made up 5% of the public health workforce and 12% of the private health workforce. Sixty percent of all doctors and 80% of all pharmacists were employed in the private health workforce.

2.2.1 *Public sector workforce*

The HRH Assessment identified a total of 32,809 public health sector workers. The health management and support staff group made up the largest proportion of public health workers (33%) in the public workforce. This group includes cleaners, ward helpers and other non-clinical support workers.

The paramedical practitioner's group was the second largest group in the public health sector, followed by the nursing associate professional's group, which includes ANMs and MCHWs. The nursing professionals group was another large group in the public sector and includes staff nurses, senior and specialist nurses, and nursing officer cadres.

2.2.2 *Private sector workforce*

A total of 21,368 health workers were documented in the private health sector. The largest group was the health management and support workers (45%) followed by nursing professionals (17%) and doctors (12%).

Many fewer paramedical practitioners were working in the private sector (1,160) than in the public sector (8,679). However, 80% of pharmacists, 75% of dentists and 60% of doctors (both generalist and specialist groups) were working in the private sector.

It seems that many of the health workers employed in the private sector were also working in the public sector. Of the 2,642 doctors employed in the private sector, approximately 60% were working less than 48 hours, pointing to a high likelihood that some of these were also employed in the public sector and had dual roles.

Table 1:   Health workers in the public and private sector and population ratios

Health occupational category/cadre	Public		Private		Total		Health workers per 1,000 population
	no.	%	No.	%	No.	%	
Generalist medical practitioners	1,123	3%	1,327	6%	2,450	5%	0.09
Specialist medical practitioners	636	2%	1,315	6%	1,951	4%	0.07
Nursing professionals	3,371	10%	3,683	17%	7,054	13%	0.27
Nursing associate professionals	4,876	15%	1,393	7%	6,269	12%	0.24
Paramedical practitioners	8,679	26%	1,160	5%	9,839	18%	0.37
Ayurveda medicine practitioners and assistants	715	2%		0%	715	1%	0.03
Dentists	57	0%	173	1%	230	0%	0.01
Pharmacists	86	0%	349	2%	435	1%	0.02
Environmental and public health workers	314	1%	20	0%	334	1%	0.01
Laboratory workers	939	3%	1,283	6%	2,222	4%	0.08
Health management and support workers	10,797	33%	9,599	45%	20,396	38%	
Other health workers	98	0%	81	0%	179	0%	
Unclassified*	1,118	3%	985	5%	2,103	4%	
Total no	**32,809**		**21,368**		**54,177**		
Total %	**61%**		**39%**				

*Source: HRH Assessment 2012.   *Note: 'Unclassified' health workers are health workers for whom no occupation was specified and/or documented by the HRH Assessment.*

2.3   RATIO OF SELECTED STAFF TO POPULATION RATIOS

Nepal currently has 0.17 doctors per 1,000/population and 0.50 nurses per 1,000/population when the total number of doctors and specialists (4,401) and nursing professionals and nursing associates groups (13,323) across the public and private sectors are considered (see Table 2). These ratios are based on an estimated 2011 population for Nepal of 26.5 million. This represents a total ratio of 0.67 doctors and nurses per 1,000/population, which is significantly less than the WHO recommendation of 2.3 doctors, nurses and midwives per 1,000/population and is low compared to other countries in South Asia (Table 2).

Table 2:   Ratio of doctors and nursing/midwifery staff to population

Country	Doctor	Date	Nursing & midwifery	Date
Bhutan	0.24	2011	1.09	2011
Bangladesh	0.30	2011	0.11	2011
Nepal	0.18	2012	0.50	2012
India	0.074	2012	0.80	2004

Sources: WHO 2013 and MoHP 2012 HRH Database

2.4   HEALTH WORKER REGISTRATION

The Nepal Medical Council has been registering over 1,000 doctors per annum since 2010, as shown in Table 3.[2] Yet shortages of doctors and specialists continue to be reported in the public sector, especially in district hospitals and primary health care centres (PHCCs) (MoHP 2011b: pp. 127-130; NPC 2011; MoHP and NHSSP 2011; MoHP 2011a).

Based on the data collected through the HRH Assessment (MoHP 2011a) there is a stock of 4,401 generalists and specialist medical doctors in the health workforce — not much more than the numbers registered since 2009. It is a similar situation for the nursing cadres with the Nursing Council estimating that they will register over 4,000 new nurses in 2013[3]; and yet only 7,054 nursing professionals are currently employed in the public and private health sectors.

It was not possible to compare these registrations with government and/or private sector annual recruitment data to determine how many of the cadres registered are entering the Nepal labour market and are available for employment. But the gap between annual registrations and the numbers currently employed in the public and private sector suggests that a significant number of this cadre may be working outside the health sector or as doctors outside the country.

Table 3:   Number of registered doctors (MBBS) and dentists (BDS) in Nepal

Year	MBBS		MBBS total	BDS		BDS total
	Male	Female		Male	Female	
2009	592	255	847	36	76	112
2010	697	321	1,018	50	53	103
2011	822	304	1,126	53	57	110
2012	698	288	986	77	87	164
Total no.	2,809	1,168	3,977	216	273	489
Total %	71%	29%		44%	56%	

Source: Nepal Medical Council July 2013

2.5   GENDER DISTRIBUTION BY HEALTH OCCUPATION/CADRE

Table 4 presents the gender distribution of health occupations/cadres for the public and private health workforces. From the data collected through the 2012 HRH Assessment it is evident that women are less represented across all cadres, with the exception of the nursing professional and associate professional groups (and dentists) where they are mostly female. The great majority of personnel were male in the other categories.

Overall 46% of health workers were female in the public and private sectors, but only 12% of the public health workforce was female. Amongst doctors the percentage was much lower (at 19% female for specialists and 25% female for generalists) across both sectors, with the exception of dentists who make up 61% of the total.

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[2] Nepal Medical Council, July 2013
[3] Nepal Nursing Council June 2013

Table 4: **Gender distribution by health occupation/cadre for the public and private health sector**

Health occupational category/cadre	Female	Male	Total	Proportion female for both sectors	Proportion female for public sector only
Generalist medical practitioners	622	1,828	2,450	25%	25%
Specialist medical practitioners	375	1,576	1,951	19%	19%
Nursing professionals	7,053	1	7,054	100%	100%
Nursing associate professionals	6,268	1	6,269	100%	100%
Paramedical practitioners	1,978	7,861	9,839	20%	16%
Ayurveda medicine practitioners & assistants	81	634	715	11%	11%
Dentists	140	90	230	61%	42%
Pharmacists	135	300	435	31%	16%
Environmental and public health workers	39	295	334	12%	7%
Laboratory workers	482	1,740	2,222	22%	16%
Health management and support workers	6,875	13,521	20,396	34%	24%
Other health workers	40	139	179	22%	16%
Unclassified	729	1,374	2,103	35%	23%
Total	**24,817**	**29,360**	**54,177**	**46%**	**40%**

Source: HRH Assessment 2012

2.6   AGE DISTRIBUTION BY OCCUPATION/CADRE

Data on age were not provided for 18,492 (34%) of the public and private health workers documented by the HRH Assessment. However, the data that was provided indicates that 25% of this number was thirty years of age and below; 58% were aged between 31 and 50 years old and 17% were 51 years of age or older.

2.6.1   *Age distribution of the public health workforce*

As shown in Table 5, 34% of the public health workforce for which age data was available was aged between 41 and 50 years old. The smallest group (13%) was the 30 years and below group. Approximately 23% of the documented public health workers were over 51 years of age and will be approaching retirement age (currently 58 years for civil servants and 60 for health workers) in the next 7 to 10 years. The low numbers of those aged 30 years and below could be explained by the freeze on recruitment that has been in place for the past few years.

The low number of nursing professional associates and paramedical practitioners in the 30 years and below age group is of particular concern, as these groups comprise mainly frontline health workers, such as ANMs and AHWs. A decreasing numbers of these cadres entering the service will make it difficult for the government to replace those who leave and will also have an impact on service provision at the lower levels of the health system.

A significant number (101) of specialist medical practitioners are 51 years of age or older, with only five specialists being 30 or younger. This small number in the younger age group could be

explained by the recruitment freeze, or that specialists take longer to produce and would therefore tend to be older when they enter the service. However, it may also suggest that these specialists are being attracted to jobs elsewhere. The aging of this segment of the workforce and the limited entry routes (i.e. training places) available may result in an insufficient number being available to replace those who will retire or leave in the next 10 years.

This situation and the low numbers of nursing professional associates and paramedical practitioners entering the public health sector should be closely monitored. This situation may need special attention in workforce planning processes and when forecasting human resource requirements to meet future service delivery needs.

The data for public sector nurses show that more of the nursing professionals are young (30 years and under) while more of the nursing professional associates are older (over 30 years). The high amount of missing data makes it difficult to draw conclusions from these trends.

Table 5: Public health workforce by cadre and age group in years

	Health occupational category/cadre	<=30	31-40	41-50	51+	Not avail.	Total
1	Generalist medical practitioners	231	210	74	77	531	1,123
2	Specialist medical practitioners	5	83	60	101	387	636
3	Nursing professionals	1,157	497	261	225	1,231	3,371
4	Nursing associate professionals	389	1,285	1,622	382	1,198	4,876
5	Paramedical practitioners	383	2,086	1,878	2,084	2,248	8,679
6	Ayurveda medicine practitioners and assistants	99	255	109	60	192	715
7	Dentists	10	10	12		25	57
8	Pharmacists	13	14	14	18	27	86
9	Environmental and public health workers	3	17	79	133	82	314
10	Laboratory workers	137	333	109	127	233	939
11	Health management and support workers	400	1,838	3,254	1,854	3,451	10,797
12	Other health workers	17	21	13	9	38	98
13	Unclassified	133	149	92	47	697	1,118
	Total no.	**2,977**	**6,798**	**7,577**	**5,117**	**10,340**	**32,809**
	Average of total excluding na	**13%**	**30%**	**34%**	**23%**		**22,469**

Source: HRH Assessment, 2012

2.6.2   Age distribution of the private health workforce

The available data show that the private health workforce is younger than the public sector workforce, with 78% of the private workforce being under 40 years of age, and only 7% being 51 years and older (Table 6).

The large number of generalist medical practitioners under 30 years of age (58%) in the private sector suggests that the private sector is more successful in attracting newly graduated doctors. While there are fewer doctors in the older age groups (41 to 51 years old and above) in the

private sector, there are sufficient numbers in the younger age groups, who, if retained should be able to replace losses due to retirement. The smaller numbers over 41 years of age could suggest that this is the age at which they leave the private health sector to work elsewhere, in other sectors or outside the country.

A similar situation is reflected for nursing professionals, where the majority (84%) is 30 years and younger. With the exception of the specialist medical practitioners, the majority of private health sector workers are aged 30 years and below, suggesting that the private sector is attracting many of the newly graduated health workers. There is a significant difference between the number of nursing professionals in the 30 and younger age group (1,773) and the number older than 30 years, which suggests a rise in the recent past in the numbers of nursing professionals entering and working in the private sector.

Table 6:   Private health workforce by cadre and age group in years

	Health occupational category/cadre	<=30	31-40	41-50	51+	na*	Total
1	Generalist medical practitioners	424	243	31	43	586	1,327
2	Specialist medical practitioners	55	265	132	104	759	1,315
3	Nursing professionals	1773	195	78	55	1,582	3,683
4	Nursing associate professionals	618	325	59	17	374	1,393
5	Paramedical practitioners	417	415	83	31	214	1,160
6	Dentists	63	33	10	1	66	173
7	Pharmacists	145	64	39	10	91	349
8	Environmental and public health workers			1	1	18	20
9	Laboratory workers	461	317	94	21	390	1,283
10	Health management and support workers	1,964	2,309	1,462	617	3,247	9,599
11	Other health workers	25	12	7		37	81
12	Unclassified	77	61	42	17	788	985
	Total no.	**6,022**	**4,239**	**2,038**	**917**	**8,152**	**21,368**
	Average of total excluding na	**46%**	**32%**	**15%**	**7%**		**13,216**

Source: HRH Assessment 2012
* No date of birth provided for these groups

2.7   DISTRIBUTION OF THE HEALTH WORKFORCE BY CADRE AND REGION

Across all regions, the total number of health workers in both the public and private sectors is highest in the health management and support workers cadres (20,396), followed by paramedical practitioners (9,839) then nursing professionals (7,054). Across all regions, the total number of health workers in the two sectors combined is lowest in the dentists category (230), followed by the environmental and public health workers category (334), and then pharmacists (435).

2.7.1   *Public health workforce by region*

The data collected through the HRH Assessment shows that the public health workforce was quite well distributed across the five development regions in relation to their populations, except for

the relatively higher proportion in the central region. The number here is due to the large number of higher level hospitals in this region.

Across all regions, the total number of public sector health workers was highest in the paramedical practitioner category, followed by health management and support workers and then nursing associate professionals. Across all regions, the total number of health workers is lowest in the environmental and public health workers category, followed by dentists, and then pharmacists.

Table 7: Distribution of public health workforce by region

	Health occupational category/cadre	Central	Eastern	Western	Mid western	Far western	Total no.
1	Generalist medical practitioners	629	186	193	77	38	1,123
2	Specialist medical practitioners	543	29	38	22	4	636
3	Nursing professionals	2,140	717	291	151	72	3,371
4	Nursing associate professionals	1,312	1,429	1,087	619	429	4,876
5	Paramedical practitioners	2,931	1,899	1,758	1,261	830	8,679
6	Ayurveda medicine practitioners and assistants	222	118	194	112	69	715
7	Dentists	38	5	12	2	0	57
8	Pharmacists	70	5	8	1	2	86
9	Environmental and public health workers	139	54	56	47	18	314
10	Laboratory workers	439	225	127	82	66	939
11	Health management and support workers	5,238	2,069	1,684	1,036	770	10,797
12	Other health workers	64	10	13	9	2	98
13	Unclassified	1,021	33	7	56	1	1,118
	Total no.	**14,786**	**6,779**	**5,468**	**3,475**	**2,301**	**32,809**
	Total %	**45%**	**21%**	**17%**	**11%**	**7%**	
	% of Nepal's population (2011)	36%	22%	19%	13%	10%	
	Average no. per cadre (including unclassified as a cadre)	**1,137**	**521**	**421**	**267**	**177**	
	Median no. per cadre (including unclassified as a cadre)	**543**	**118**	**127**	**77**	**38**	

Source: MoHP database 2012

2.7.2 *Private health workforce by region*

The data collected through the HRH Assessment shows that the Eastern, Western and Far Western regions have relatively fewer private health workers in relation to their populations. In particular the Far West had only 2% of private health workers while it accounts for 10% of the population (see Table 8).

For the private sector the Far Western region has fewer health workers/cadres on average (32) (median=16) across the occupational categories in the private sector than any other region

(counting 'unclassified' as a cadre). Except for the Central region, the Western region has more private health workers on average (392) (median=260) across the occupational categories in the private sector than any other region.

Table 8:   Distribution of private health workforce by region

	Health occupational category/cadre	Central	Eastern	Western	Mid western	Far western	Total
1	Generalist medical practitioners	809	188	272	49	9	1,327
2	Specialist medical practitioners	894	125	248	29	19	1,315
3	Nursing professionals	2,330	427	711	202	13	3,683
4	Nursing associate professionals	432	365	499	44	53	1,393
5	Paramedical practitioners	445	171	345	177	22	1,160
6	Dentists	136	9	23	4	1	173
7	Pharmacists	177	35	107	6	24	349
8	Environmental & public health workers	1	0	19	0	0	20
9	Laboratory workers	643	184	315	115	26	1,283
10	Health management and support workers	5,604	1,037	2,068	677	213	9,599
11	Other health workers	49	15	15	1	1	81
12	Unclassified	843	39	85	10	8	985
	Total no.	**12,363**	**2,595**	**4,707**	**1,314**	**389**	**21,368**
	Total %	**58%**	**12%**	**22%**	**6%**	**2%**	
	% of Nepal's population (2011)	36%	22%	19%	13%	10%	
	Average no. per cadre (including unclassified as a cadre)	**1,030**	**216**	**392**	**110**	**32**	
	Median no. per cadre (including unclassified as a cadre)	544	148	260	36.5	16	

Source: MoHP database 2012

2.8   DISTRIBUTION OF PUBLIC HEALTH WORKERS BY TYPE OF FACILITY

The data in Table 9 show that health posts and sub-health posts had the largest number of public health workers (12,884, 39%), followed by the central level hospitals, which had 7,386 (23%) of the public health workforce.

Across all facilities paramedical practitioners were the largest group (8,679), with 76% (6,563) of their total number located in SHPs and health posts. The majority of nursing associate professionals was also located in SHPs, with 72% (3,517) working in SHPs and health posts. The central hospitals had the highest number of nursing professionals, with 46% (1,548) of this group located in these facilities.

Of all the doctors, including generalists and specialists, available in the public health workforce, 76% (484) were located in the central hospitals and only 9% in district hospitals.

Table 9:   Distribution of public health workers by facility type

	Health occupational category/cadre	Commun. clinics	SHPs	Health posts	PHCCs	DHOs/ DPHOs	Zonal hospitals	Central hospitals	Region, sub-regional	Teaching hospital	Ayurved. clinic	District Ayurved.	Central jail	Total no.	Total %
1	Generalist medical practitioners	1		5	109	245	164	361	83	148		5	2	1,123	3%
2	Specialist medical practitioners				1	51	60	484	32	7	1			636	2%
3	Nursing professionals		3	10	134	393	307	1,548	179	792	2	2	1	3,371	10%
4	Nursing associate professionals	2	2,523	994	424	552	158	85	26	102	5	4	1	4,876	15%
5	Paramedical practitioners	2	4,316	2,247	682	798	237	327	54	9		5	2	8,679	26%
6	Ayurveda medicine practitioners and assistants		3	1			29	21	2	1	395	263		715	2%
7	Dentists					2	15	19	4	17				57	0%
8	Pharmacists					15	7	49	6	9				86	0%
9	Environmental and public health workers		11	100	42	113	3	34	11					314	1%
10	Laboratory workers		2	5	164	266	101	226	36	133	3	2	1	939	3%
11	Health management and support workers	2	1,395	1,250	442	1,869	851	3,221	380	894	326	157	10	10,797	33%
12	Other health workers			1		34	6	40	8	8	1			98	0%
13	Unclassified		8	10	1	44	20	971	39	20	2	3		1,118	3%
	Total no.	**7**	**8,261**	**4,623**	**1,999**	**4,382**	**1,958**	**7,386**	**860**	**2,140**	**735**	**441**	**17**	**32,809**	
	Total %	0%	25%	14%	6%	13%	6%	23%	3%	7%	2%	1%	0%		

2.9 DISTRIBUTION OF HEALTH WORKFORCE BY ECOLOGICAL ZONE

The data shows that, overall, relatively more health workers were based in the hill areas than the Terai in relation to their populations (see Table 10). The Terai has only 36% of health workers while it accounts for 50% of the total population.

The main occupational groups located in the mountain areas were paramedical practitioners (37%) and nursing associate professionals (22%). The HRH Assessment identified no dentists or pharmacists in the mountain areas.

The greatest concentration of doctors (generalists and specialists) and nurses (professionals and professional associates) were in the hill areas, with 66% of all doctors and 58% of all nurses located there. This is partly explained by the central level hospitals being in the Kathmandu valley, which is in the hills.

Table 10: **Distribution of public and private health workers by mountain, hill and Terai zones**

	Health occupational category/cadres	Mountain	Hill	Terai	Total
1	Generalist medical practitioners	42	1,560	848	2,450
2	Specialist medical practitioners	4	1,351	596	1,951
3	Nursing professionals	56	4,596	2,402	7,054
4	Nursing associate professionals	567	3,094	2,608	6,269
5	Paramedical practitioners	959	4,807	4,073	9,839
6	Ayurveda medicine practitioners & assistants	94	406	215	715
7	Dentists		176	54	230
8	Pharmacists		272	163	435
9	Environmental and public health workers	21	164	149	334
10	Laboratory workers	46	1,215	961	2,222
11	Health management and support workers	808	12,491	7,097	20,396
12	Other health workers	1	123	55	179
13	Unclassified	29	1,797	277	2,103
	Total no.	**2,627**	**32,052**	**19,498**	**54,177**
	Total %	**5%**	**59%**	**36%**	
	% of Nepal's population (2011)	**7%**	**43%**	**50%**	

Source: HRH Assessment 2012

2.10 DISTRIBUTION OF HEALTH WORKFORCE BY TYPES OF EMPLOYMENT

2.10.1 *Public health workforce*

The majority of public health workers are permanent employees; 26,860 (82%) of the posts across all government facilities were sanctioned posts, with 13% (4,211) of the public health workforce employed on contract (Table 11). A small number of health workers (3%) had temporary employment or had other types of employment arrangements. Most of the staff (approximately 96%) in the PHCCs, health posts and SHPs are permanent employees, while in the

central, regional and zonal hospitals approximately 25% are contract staff. See Table 11 for more details on the distribution by types of employment.

Table 11:   Distribution of the public health workforce by type of employment

	Health facility	Unidentified	Permanent	Temporary	Contract	Other	Total
1	Central hospitals	768	5,202	310	1,032	75	7,387
2	Regional/sub-regional	0	650	3	207	0	860
3	Zonal hospitals	4	1,159	123	666	6	1,958
4	DHOs/DPHOs	11	3,103	189	1,054	25	4,382
5	District Ayurveda	0	401	18	22	0	441
6	PHCCs	2	1,910	11	72	4	1,999
7	Health posts	6	4,377	37	185	17	4,622
8	SHPs	7	7,915	55	241	43	8,261
9	Ayurvedic clinics	0	707	14	12	2	735
10	Teaching hospital	6	1,419	2	713	0	2,140
11	Central jail	0	13	0	4	0	17
12	Community clinics	0	4	0	3	0	7
	Total no.	**804**	**26,860**	**762**	**4,211**	**172**	**32,809**
	Total %	**2%**	**82%**	**2%**	**13%**	**1%**	

2.10.2 *Private health workforce*

The data available on the private for-profit and private not-for-profit health workforce indicates that the majority (44%) were permanent employees while 36% (7,776) were employed on contract. Approximately 17% had temporary or unspecified types of employment arrangements. See Table 12 for more details on the distribution of the private health workforce by type of employment.

Table 12:   Distribution of the private health workforce by types of employment

Sector	Permanent	Temporary	Contract	Others	Unidentified	Total
Private for-profit	7,101	3,111	5,932	113	637	16,894
Private not-for-profit	2,244	294	1,844	38	54	4,474
Total no.	**9,345**	**3,405**	**7,776**	**151**	**691**	**21,368**
Total %	**55%**	**20%**	**46%**	**1%**	**4%**	

2.11   DISTRIBUTION OF PUBLIC HEALTH WORKFORCE BY EMPLOYER AND REGULATIONS

The majority (55%) of the public health workforce are governed and regulated by the Health Service Act (see Table 13). The Civil Service Act governs 19% of the public health workforce, which means that the management of this group of workers, including their transfer, is the responsibility of another sector and is outside the control of MoHP.

Table 13:   Types of service regulation

Type of Service Regulation	No.	%
Health Service Act	18,073	55%
Civil Service Act	6,193	19%
Army Act	1,183	4%
Development Board	2,218	7%
Local Self-Governance Act	373	1%
National Planning Commission	185	1%
Scholarship Contract Act	27	0%
B.P. Koirala Institute of Health Sciences (BPKIHS)	2,132	6%
Police	575	2%
Armed Police	398	1%
Gangalal	306	1%
Others	1,033	3%
Unclassified	113	0%
Total no.	**32,809**	

2.12   NON-AVAILABILITY OF HEALTH WORKERS

The majority of the health workforce was available in their facilities at the time of the assessment. The regional hospitals and Ayurvedic facilities reportedly had the most staff absent, with absence rates of 4.5% and 4.4 % respectively.

The main cause of absence from the facilities identified through the HRH Assessment was leave, which accounted for 43% of all absences. The zonal hospitals had the highest level of absence (68%) as a result of leave, followed by Ayurvedic clinics (64%). More details on the causes of the non-availability of health workers are given in Table 14.

Table 14:   Causes of absence of health workers (percentages)

Health facility	Unidentified	Leave	Training	Deputation out	Other
Central hospitals	22	44	6	22	5
Regional/sub-regional	10	26	0	5	59
Zonal hospitals	21	68	3	0	8
DHO/DPHO	19	38	2	10	31
District Ayurveda	8	54	0	23	15
PHCCs	7	48	0	12	33
Health posts	5	32	10	17	37
SHPs	4	39	8	8	42
Ayurvedic clinics	9	64	0	18	9

2.13 CASTE AND ETHNIC IDENTITY OF THE WORKFORCE

Eighty-four percent of the workforce are from the 10 caste and ethnic groups listed in Table 15. The 'other' category includes Terai Brahmins, Rais, Sanyasis, Muslims, Damai/Dholis, and Dhanuks. Sixty-three percent of the workforce were hill Brahmins, Chhetris and Newars — the relatively most advantaged groups.

Table 15:   Distribution of health workers by caste and ethnic group

	Groups	Total no.	Total %
1	Hill Brahmin	18,031	32%
2	Chhetri	10,311	18%
3	Newar	7,520	13%
4	Tharu	2,161	4%
5	Yadav	2,081	4%
6	Magar	1,941	3%
7	Teli	1,426	3%
8	Tamang	1,343	2%
9	Gurung	1,235	2%
10	Thakuri	1,065	2%
11	Other	8,348	15%
12	Unclassified	563	1%

2.14 HUMAN RESOURCES FOR HEALTH PRODUCTION

One hundred and ninety-six training institutions were identified during the HRH Assessment providing proficiency certificate level training courses for health workers. These institutions, which are owned and run by the public sector and a range of private for-profit and not-for-profit organisations, were offering approximately 399 health related training courses (see Table 16). Only 19% of these training courses were provided by government-owned institutions. A large number of the paramedical (178, 83%) and nurse (87, 67%) training courses were provided by private not-for-profit institutions and organisations. The private not-for-profit institutions were offering only a few courses, mainly nursing and paramedical courses.

Table 16:   Health training providers and types of courses

Course	Public	Private for-profit	Private not-for-profit	Total
Medicine *	5	16	0	21
Dentistry	1	5	1	7
Pharmacy	4	22	1	27
Nursing and midwifery	37	87	5	129
Paramedical and other health workers	30	178	7	215
Total no.	**77**	**308**	**14**	**399**
Total %	**19%**	**77%**	**4%**	

*Source: 2012 HRH Assessment.   *Includes 3 Ayurveda colleges*

Tables 17 and 18 give details of nurse training institutions and the number and types of courses. More than half are run by Centre for Technical Education and Vocational Training (CTEVT)-affiliated nursing colleges.

Table 17:   Nurse training colleges and courses

Training institution	Type of course	No. courses
CTEVT affiliated nursing colleges	PCL	101
	ANM	50
Tribhuvan University Institute of Medicine	PCL	6
	BSc	7
	B Nursing	9
	MN	4
Purbanchal University	B Nursing	25
	BSc	25
Kathmandu University	PCL	1
	BNs	4
	BSc	7
B.P. Koirala Institute of Health Sciences (BPKIHS)	PCL	1
	B Nursing	1
	BSc	1
	MSc	1
	MN	1
National Academy of Medical Sciences (NAMS), Bir Hospital	B Nursing	1
	PCL	1
Pokhara University	BSc	1
Total		**247**

Source: Nepal Nursing Council, 2013

Of the nurse training courses available, the majority are at proficiency certificate level (PCL) (44%), while others include bachelor degree level courses (33%) and courses for ANMs (20%). Masters' level courses represent only a small proportion of nurse training courses offered in Nepal (Table 18).

Table 18:   Nurse training programmes

Training programme	Total no. courses	Total % courses
ANM	50	20%
B Nursing	36	15%
BNs	4	2%
BSc	41	17%
Master of Nursing	5	2%
MSc	1	0%
PCL	110	44%
Total	**247**	

Source: Nepal Nursing Council 2013

2.14.1 _Number of students enrolled and graduated from programmes_

Nepal's health training institutions are producing a significant number of health workers annually. As shown in Table 19 approximately 10,000 health workers are graduating each year. Between 2009 and 2011 over 32,000 health workers were produced, including 7,099 doctors, 8,681 nursing professionals and 9,096 nursing professional associates, dentist, pharmacists, laboratory and paramedical health workers.

These data are generated from a review of information provided by the training institutions surveyed and information form the Ministry of Education in Nepal and do not include those educated and trained outside the country. Note that the latter may return and could potentially increase the numbers of qualified health workers in the labour market. However, even with the numbers of key health workers produced within Nepal alone, the current and future supply from training should be sufficient to meet health services delivery needs, as long as they can be attracted and retained within Nepal's health sector.

Table 19:   Enrolment and production of key cadres 2009–2011

Cadre	Enrolment				Graduated			
	2009	2010	2011	Total	2009	2010	2011	Total
Doctors (generalists and specialists)	2,359	2,483	2,466	7,308	2,374	2,375	2,350	7,099
Nursing professionals (SN, BN, B.Sc. Nursing, MN)	3,695	4,251	3,949	11,895	2,946	2,904	2,831	8,681
Nursing associates professional (ANM)	1,150	1,157	893	3,200	1,051	1,030	1,042	3,123
Dentists	318	315	190	823	195	203	198	596
Pharmacists	1,200	1,028	1,290	3,518	798	970	879	2,647
Laboratory workers	706	1,328	1,020	3,054	870	910	950	2,730
Other health workers (paramedics, public health, radiography)	2,244	3,828	3,485	9,557	2,746	2,640	2,050	7,436
Total	**11,162**	**14,390**	**13,293**	**39,355**	**10,980**	**11,032**	**10,300**	**32,312**

Source: HRH Assessment 2012

It was not possible to determine the extent of attrition from training (between enrolment and graduation) from the data available and shown in Table 19 as some courses are longer than the 3-year timeframe used. However a comparison of the numbers enrolled in 2009 and the numbers graduating in 2011 for courses that are more likely to be 3 years or less (e.g. nursing professionals) shows some degree of attrition. For nursing professionals the difference between graduation in 2011 and expected enrolment in 2008 could either be due to high levels of attrition or rapid expansion of intake in 2009.

However, attrition from training rates is highlighted in Table 20 below, which shows that several courses were under-subscribed and there is capacity to produce greater numbers of most types of health workers.

Table 20:   Production capacity for selected training courses as of 2011/12

Health courses	Production capacity per year	Enrolled per year	Graduated per year
PCL Nursing (Staff Nurse)	4,017	1,756	1,451
TSLC Community Medicine Assistant	3,036	2,677	2,677
TSLC Auxiliary Nurse Mid-wife (ANM)	1,910	1,680	1,133
PCL General Medicine (HA)	1,902	820	631
PCL Laboratory Technicians	1,320	580	102
TSLC Laboratory Assistant	1,240	680	572
BSc in Nursing	610	607	607
Bachelor of Nursing/Post-Basic Bachelor of Nursing (PBN)	666	530	461
PCL Pharmacy	1,000	850	490
B Public Health	752	632	632
MBBS	1,760	1,074 (Nepali)	1,014 (Nepali)
PCL Radiology/Radiography	438	120	44
Bachelor of Dentistry	370	321	296
B. Pharma	495	368	368
TSLC Auxiliary Ayurveda health worker	240	200	61

Source: Extracted from presentation by Rajendra Prasad Gupta, HRH Conference, June 2013

2.14.2 *In-service training and continuing education*

Table 21 shows the types of in-service training courses provided in Nepal and the numbers trained annually. The SBA training for medical doctors, nurses and ANMs accounted for 27% of all in-service and continuous education trainees to date for 2012/13. A high proportion (55%) of total trainees had been trained on safe delivery, maternal and reproductive health (1,839/3,318).

Table 21:   Training activities for selected health professionals, mid-level, auxiliary, and other clinical staff for 2012/13

Training activities	Trained/year no.	Trained/year %
SBA training (70 days) for medical doctors, nurses and ANMs	895	27%
Communicable disease control training for health post and hospital staff	500	15%
Gender based violence and conflict management training	320	10%
Safe delivery training for medical doctors and nursing staff	200	6%
Sr. AHW training for AHWs	167	5%
Consumer oriented training for health service providers	125	4%
Medico-legal training for medical doctors	100	3%
Family planning counselling training for health workers	100	3%
Training of trainers (ToT) for adharbhut (basic health workers) trainers	100	3%
Training of reproductive health care services in emergency conditions	70	2%
Sr. AHW Training (180 days)	70	2%

Training activities	Trained/year no.	Trained/year %
ANM training for MCHWs	60	2%
Minilap training for medical officers and nursing staffs	60	2%
Vasectomy training for medical officers	60	2%
Implant Training for nursing staff and paramedics	60	2%
Intra-Uterine device (IUD) training for nursing staff	60	2%
Sr. ANM training for ANMs (180 days)	60	2%
Operation theatre management training for doctors and staff nurses	56	2%
Safe delivery refresher training for medical officers and nurses	40	1%
Aadharbhut ANM training (Karnali and Far-Western Region)	32	1%
Appreciative enquiry (AE) training (central)	20	1%
Behaviour change communication training for district supervisors	20	1%
Clinical skill training for developing SBA trainers	20	1%
Emergency service management training for district hospitals	20	1%
Rehabilitation training (central)	20	1%
Mental disease management training (district hospitals)	20	1%
Bio-medical training for technical assistants	16	0%
Electrical information technology training for trainers	15	0%
Caesarean Section Training for medical officers and district hospitals	12	0%
X-ray repairing training for x-ray technicians	10	0%
Ultrasound training for medical doctors	10	0%
Total no.	**3,318**	

Source: Extracted from presentation by Rajendra Prasad Gupta, HRH Conference, June 2013

2.15   FURTHER ANALYSIS

This tabular presentation of the results of the HRH Assessment followed the WHO Human Resources for Health Country Profile template (AHWO 2009). Further analysis of the data is possible on issues of interest to MoHP and other stakeholders.

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Category	Title
Generalist medical practitioners	• Family physician • General practitioner • Medical officer • Medical officer senior • Medical superintendent
Specialist medical practitioners	• Anaesthesiologist • Cardiologist • Consultant ENT surgeon • Consultant gastroenterologist • Consultant psychiatrist • Medical specialist • Paediatrician
Nursing professionals	• Anaesthesia nurse • Anaesthesia nurse senior • Hospital nurse inspector • Matron • Nurse • Nurse ICU • Nursing officer • Public health nurse • Staff nurse
Nursing associate professionals	• Mainly ANM and MCHWs
Paramedical practitioners	• AHW • CMA • Community medical assistant • Family planning assistant • Family planning officer • Immunisation supervisor • Immunisation supervisor-inspector • Inspector • Integrated chikitsa officer
Ayurveda Medicine Practitioners and Assistants	• Ayurveda expert senior consultant • Ayurvedic assistant • Ayurvedic physician and doctor • Baidhya • Kabiraj and ayurvedic assistant
Dentists	• Dental hygienist/assistant • Dental officer • Dental surgeon • Dental technician • Prosthodontist
Pharmacists	• Pharmacist

Category	Title
	• Pharmacy assistant • Pharmacy inspector • Pharmacy officer • Pharmacy officer chief • Pharmacy sales • Pharmacy sales assistant • Pharmacy supervisor • Store keeper
Environmental and public health workers	• Cold chain officer • Public health inspector • Public health inspector senior • Public health officer • Public health officer senior • Sanitation worker • Vector born disease control assistant/supervisor
Laboratory workers	• Biomedical engineer • Cath. lab technician • Lab assistant • Lab technician • Medical lab technologist • Microbiologist • Microbiology
Health management and support workers	• Accountant and accounts assistant • Administrative officer • Ambulance driver • Clerk and typist • Clinic assistant • Clinic helper • Cook • Intelligence officer • Lecturer • Managing director • Office assistant and helper • Peon • Ward attendant
Other health workers	• Radiographer • Radiologist • Speech and hearing pathologist