Workload and Staffing Needs Assessment at Public Sector Health Care Facilities in Bangladesh

STUDY TEAM

Team Lead
Prof. Liaquat Ali, MBBS, PhD
Vice Chancellor
Bangladesh University of Health Sciences

Deputy Team Leader
Masuma Mannan
Health System Advisor
Bangladesh University of Health Sciences

Associate Consultant
Dr. Mithila Faruque
Assistant Professor
Bangladesh University of Health Sciences

Field Supervisors
Masfida Akhter
Hasina Akhter Chowdhury
Jannatul Nayeem

Cover & Design
Moshiur Rahman Khan
Md. Kabirul Abedin

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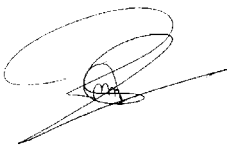
MESSAGE

I am happy to see the initiative of conducting such a study for assessment of the workload of the existing health workforce and their staffing needs. It is very useful and important for different reasons, as it is the only effective means through which strengthens and weakness of an organization can be categorically considered and addressed. For providing better services to the people, it is badly required to review and consider the present condition of workplace to address the changes happening from time to time. In spite of some gaps and lapses as the first initiative, it is fine. I thank and congratulate those who have undergone the troubles of conducting everything to publish the document. I request to arrange another survey by taking into consideration everything which is necessary.



Sheikh Rafiqul Islam
Additional Secretary
Health Services Division
Ministry of Health and Family Welfare
Govt. of the People's Republic of Bangladesh

World Health Organization
Bangladesh

MESSAGE

Bangladesh aspires to achieve the Sustainable Development Goals (SDG) including Universal Health Coverage (UHC) by 2030. UHC calls for equity in healthcare access so that no one faces financial hardship while accessing healthcare and no one should be left behind. Now to ensure access to quality health care, it is a prerequisite to have the right number of health workforce with the right skills in the right place at the right time.

There is a global shortage of around 18 million health workers and shortage in WHO South East Asia Region countries of around 6.9 million. Bangladesh is historically experiencing shortage in health workforce. Current threshold density of doctor, nurse and midwife is about 8.3 where recommended density is 44.5 per 10,000 population in the SDG period. This emphasizes the need to formulate an evidence based comprehensive health workforce plan to gradually reduce the gap between the demand and supply of the health workforce in the current health system. At the same time, this also calls for proper utilization of the existing workforce functioning at their optimal performance to ensure a responsive health system.

On this front, the Global Human Resources for Health Strategy: Workforce 2030 and the Bangladesh Health Workforce Strategy 2015 recommend determining service level wise health workforce need with a focus on workload analysis.

In order to facilitate the analysis of workload of the existing staff in different countries, WHO developed the Workload Indicators of Staffing Need (WISN) method. I thank and congratulate Save the Children's MaMoni Health Systems Strengthening team, funded by USAID for the initiative to apply the WISN method in Bangladesh. I am proud of WHO Bangladesh providing technical support to this initiative. I believe this important study will help provide insight into the current performance and productivity of health workers, in order to better project the current and future needs of Bangladesh's health workforce.

The World Health Organization is committed to continue to work closely with the Government of Bangladesh, Save the Children, USAID and other stakeholders to assist the country to reach Universal Health Coverage by 2030.

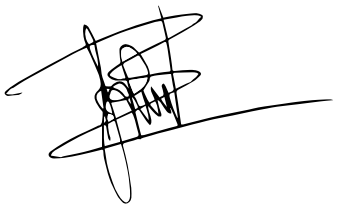
Dr Bardan Jung Rana
WHO Representative

MESSAGE

Bangladesh has made significant progress in different health indicators over the last one and a half decades. Still there is need to step up efforts if the country has to achieve the Universal Health Coverage by 2030. For instance, the country needs to prioritize addressing the issue of the chronic shortage of skilled human resources in the health sector. Beside the shortage of health workforce, there is a lack of reliable data to make evidence based policy decisions to manage the existing health workforce optimally.

The study titled "Workload and Staffing Needs Assessment at Public Sector Health Care" is part of the initiative undertaken by the Human Resources Branch of Ministry of Health and Family Welfare (MOHFW) for developing a comprehensive health workforce plan. The study findings have, as expected, underlined the inadequacy of health workforce in Bangladesh's public sector, particularly in the preventive and promotive areas, as well as for support services. Again, a substantial proportion of direct health care providers' available working time is spent on activities other than the provision of clinical services. The findings also show inequities in the distribution of human resources. Apart from identifying the gaps, the report has also come up with a set of recommendations, which, if taken into consideration, could inform the planning for health workforce. I hope that the recommendations will be taken forward for action to achieve a more responsive, balanced distribution of staff and improve productivity of the health workforce especially in context of resource constraints.

USAID's MaMoni HSS Project is happy to be a part of this initiative. I thank all those who were involved in carrying out the study and bringing out the publication.



Joby George
Chief of Party
MaMoni Health Systems Strengthening Project

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The study team sincerely acknowledges the contributions of

- Ministry of Health and Family Welfare (MOHFW), particularly Human Resource Branch of Health Services Division for facilitation and support to undertake the study;
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- Interviewers and Data entry Associates for their devotion, sincerity and hard work.

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LIST OF ABBREVIATIONS

AMC	Alternative Medical Care
ANC	Alternatal Care
ASHR	Administrative and Support Service Human Resource
AWT	Available Working Time
BHWS	Bangladesh Health Workforce Strategy
CAF	Category Allowance Factor
CAS	Category Allowance Standard
CC	Community Clinic
CHCP	Community Health Care Provider
CME	Continued Medical Education
DGFP	Directorate General of Family Planning
DGHS	Directorate General of Health Services
DP	Development Partner
DSH	District Sadar Hospital
EPI	Expanded Program on Immunization
ESP	Essential Service Package
FWA	Family Welfare Assistant
FWV	Family Welfare Visitor
GOB	Government of Bangladesh
HA	Health Assistant
HLE	Healthy Life Expectancy
HRH	Human Resource for Health
HRMU	Human Resource Management Unit
HSS	Health System Strengthening
IMCI	Integrated Management of Childhood Illness
MCH	Medical College Hospital
MCWC	Maternal and Child Welfare Centre
MDG	Millennium Development Goal
MIS	Management Information System
MOHFW	Ministry of Health and Family Planning
MOLGRDC	Ministry of Local Government Rural Development and Cooperatives

LIST OF ABBREVIATIONS

NCD	Non Communicable Diseases
NGO	Non-Governmental Organization
OPD	Outpatient Department
PF	Projection Factor
PNC	Postnatal Care
RMO	Resident Medical Officer
SACMO	Sub Assistant Community Medical Officer
SDG	Sustainable Development Goal
SEAR	South-East Asian Region
TAG	Technical Advisory Group
TF	Technological Factor
THSH	Total Health Service Hours
UF	Utilization Factor
UHC	Universal Health Coverage
UHC	Upazila Health Complex
UH & FWC	Union Health and Family Welfare Centre
UN	United Nations
USC	Union Sub Centre
WHO	World Health Organization
WISN	Workload Indicators of Staffing Need

EXECUTIVE SUMMARY

Background and Context

Bangladesh has made commendable progress within its health sector, but more rapid and coordinated progress in this area is required to achieve the goal of Universal Health Coverage (UHC) by 2030. One of the main challenges is to gain optimum improvement within the health sector is inadequacy of Human Resources for Health (HRH) both in terms of quantity and quality. The World Health Report, 2006 categorized Bangladesh among the countries with a severe health workforce shortage. The country's status of 5.8 physicians, nurses, and midwives per 10,000 population falls far below the critical threshold of 22.8 physicians, nurses and midwives per 10,000 population. Human resources are a key component of a well-functioning health system. Without adequate numbers of qualified personnel deployed at the right place to provide the needed health services, it will not be possible to achieve UHC. Therefore, a well-designed plan to ensure the availability of adequate and competent HRH in the public sector should be seen as high priority by the government of Bangladesh. The Bangladesh Health Workforce Strategy (BHWS) 2015 recommends determining service level wise (primary, secondary, tertiary) health workforce needs with a focus on adopting a workload analysis approach so that the appropriate categories and numbers of health workforce personnel with the proper skills can be determined.

In line with this strategy, the Human Resources Branch of the Health Services Division (former Human Resource Management Unit), Ministry of Health and Family Welfare (MOHFW) has taken the initiative to apply the Workload Indicators for Staffing Need (WISN) methodology developed by WHO at public sector health service delivery systems in selected districts. The Human Resources Branch, MOHFW in collaboration with USAID-funded MaMoni Health System Strengthening (HSS) Project, conducted this study in two selected districts - Kushtia and Brahmanbaria (B. Baria) and a medical college hospital - Rajshahi Medical College Hospital to develop a comprehensive picture of workload at public sector health service delivery in Bangladesh and to provide evidence for better policies on health workforce planning, distribution and service efficiency.

Objectives

The objectives of this study are:

1. To understand the existing workload of different categories of health workforce personnel engaged in providing preventive, promotional and curative services both at health facilities and at the community level;
2. To identify the gaps and inequalities in distribution between the existing and required number of different categories of staff involved in provision of Essential Service Package (ESP) through the four tiers of service delivery;
3. To recommend and make projections for health workforce needs within public sector healthcare facilities at the district level and below.

Methodology

The study applied the WHO-recommended WISN methodology with a few adaptations relevant to the workforce context in Bangladesh. The WISN method is a human resource management tool that assesses the workload pressure of the health workers in a facility and determines how many health workers of a particular type are required to cope with the workload of a given health facility. The WISN method identifies the main workload components of a staff category, time necessary for a well-trained, skilled and motivated worker to perform each activity to professional standards in the local circumstances (activity standard) and calculates the staff requirements based on workload.

Before initiating the study, a Technical Advisory Group (TAG) chaired by the Additional Secretary (Admin) & Line Director HRM Unit was formed. The members of the TAG included representatives from the key departments of MOH&FW, and relevant professionals and stakeholders involved in the health sector in Bangladesh. The TAG provided guidance and advice to the Study Team on technical issues, methodology, tools and coordination of efforts to expedite the study.

The following adaptations to the WHO-WISN method were made for this study:

- To be comprehensive almost all staff categories working at all three levels (primary, secondary and tertiary) of public sector health service delivery were included in the study instead of few selected categories. Nearly one thousand types of staff designations were identified in the public health system. These designations were grouped into 67 categories.
- In addition to health workers and staff working at the facility level, public sector health workers working at the community-level were also included in the present study.
- A modified approach was designed and applied to administrative and support service categories of staff, which have so far not been addressed in previous studies employing the WISN methodology.

The study sites were selected purposively following a model-based approach after a thorough discussion at the TAG meeting. A model was defined as a district or medical college hospital which have relatively better performance overall as evidenced by certain indicators available in the MIS. The selected facilities/sites were:

- One Medical College Hospital (Rajshahi Medical College Hospital)
- Two District Hospitals (Kushtia and B.Baria)
- Two district-level Maternal and Child Welfare Centres (Kushtia and B.Baria)
- Four Upazila Health Complexes (Daulatpur, Kumarkhali, Nabinagar and Sarail)
- Eight union-level facilities/UH&FWC/USC (Prayagpur, Kaya, Bitghar, Uttar Panisar, Hogalbaria, Jagannathpur, Jinodpur and Shahbajpur
- Four Community Clinics (Kamalpur, Jaynabad, Chouria, Aminpara)

- Community-level health workers (Family Welfare Assistants, Health Assistants, etc.) of the same unions where selected UHFWC/USC and CCs are situated were also included.

For the direct health care providers (physicians, nurses, pharmacists, community workers, etc.), data were analyzed as per the WISN user manual to calculate workload and the required number of staff members needed. The staff requirement for administrative and support services was obtained directly from the optimum number required for a particular facility. A method of calculation was formulated to develop a tool for estimating the Administrative and Support service Human Resources need at various levels of facilities.

Results and Observations

The result 'WISN ratio' is a proxy measure of the work pressure that health workers experience in their daily work in a health facility. A WISN ratio of more than one is evidence of overstaffing in relation to the workload. Conversely, a WISN ratio of less than one indicates that the current number of staff is insufficient to cope with the workload. The smaller the WISN ratio, the greater the work pressure.

- Overall, the workload analysis revealed that public sector health services in Bangladesh are operating with substantial shortages of human resources. This shortage is exacerbated by a significant number of vacant positions at all levels of facilities, as well as at the community level. The workload of the key health service providers such as Physicians, Nurses, Family Welfare Visitors (FWV), Family Welfare Assistants (FWA), Community Health Service Providers (CHCP) etc. at the different levels of health care services were found to be high at most the study facilities.

- WISN ratio for physicians ranged between 0.36-0.58 at District Hospitals (DH) and 0.4-1.21 at Upazila Health Complexes (UHC). This indicates the fairly high level of workload under which the physicians are working. At District Hospitals severe shortage of Consultants ware found in almost all specialties. All the sanctioned Consultant posts at Upazila Health Complexes included in the study were found vacant or they were deputed to other facilities. Filling up the Consultant posts will reduce the workload of Physicians and also improve availability of discipline-specific services.

- In contrast to the district hospitals, workload of the two categories of direct service providers namely Physicians and FWVs at district-level MCWCs were found to be normal (WISN ratio 1.17 and 0.93, respectively). However, it was revealed that a number of FWVs from union level facilities (UH&FWC) were deputed at MCWCs to manage the workload pressure. This might result in a service delivery gap at their original place of posting at UH&FWCs.

- A severe shortage of nurses was found in all facilities, the WISN ratio was 0.5 or less in most of the facilities. This indicates that most of the facilities managing the workload with half or less than half of required number. Though new recruitment and posting of nurses by government resulted increase in number of sectioned posts as well as placement of nurses all the facilities except one district hospital from December'16.

- In some facilities WISN ratios for technology-related staff categories such as Medical Technologists-Laboratory and Medical Technologists- Radiology & Imaging found higher than 1.0 which indicates overstaffing. But on closer inspection the reason was found to be non-or low-functioning of the relevant equipment in the facility.

- Inequalities in workload were observed among the same category of staff working at different-level facilities as well as among same-level facilities: For example, the WISN ratios for physicians vary from 0.36 in a District Hospital (DH-A) to 1.21 in a Upazila Health Complex (UHC-B) Considering the relatively difficult transport situation in the specific upazila, the ratio may not be unreasonable. However, closer attention to the uneven distribution of the ratios for nurses, which varies from 0.37 in a Medical College Hospital to 0.73 in Upazila Health Complex (UHC-D), should be given to ensure more equitable distribution.

- The workload of Family Welfare Visitors (FWV) at various UH&FWCs ranges from under- to overload (WISN ratio 0.57 to 2.00). In half of the UH&FWC locations, FWV's workload was found to be very high. The other half had low workloads. In all but one union, FWA workload was found to be high (WISN ratio ranged 0.42- 0.70). This indicates that half or less than half of the required number of FWAs are there to meet the demand. The workload on CHCPs were also very high (0.56 to 0.61) with the exception of one Community Clinic.

- Analysis of the three types of workload components (health service, support, and additional activities) of direct health service providers, particularly physicians and nurses, revealed that a substantial portion of their available working time (AWT) was spent on support and additional activities. Many of these activities are beyond the scope of their specific job assignments. Physicians at district hospitals and Upazila Health Complexes (UHC) spend 29%-34% of AWT on support and additional activities like meetings, medico-legal procedures, testifying at court, day observation events, etc. A major proportion (72% -78%) of nurses available working time is spent on support services and additional services, such as making patient beds, linen and laundry management, maintaining supply stocks, cleaning supervision, etc. They spend only 22%-28% time on providing health services. Urgent attention is required to review the job description of various staff categories (especially nurses) so that they can concentrate more on health service delivery.

- The administrative and support service human resources are often left out during HRH discussions. From the present study it was revealed that, with some sporadic exceptions, the WISN ratios for these categories of staff are critically low and in many cases, the required staff are totally absent. In these situations, calculating the WISN ratio is not possible. For example, in Medical College Hospital (with an in-patient load of about four times greater than the originally planned load), the WISN ratios for Attending Staff and Security Staff are 0.31 and 0.04, respectively. If the already sanctioned posts are filled, the situation may marginally improve to 0.62 and 0.16 only.

- The HRH requirement for revised ESP delivery was given special focus in this study. Apart from the nurses, the main deficiency found in the technology sections and supporting staff. This includes laboratory technology and X-ray imaging technology. On considering the resultant effect (as expressed by Projection Factor

(PF), Utilization Factor (UF) and Technological Factor (TF)), the HRH requirements in 2021, 2025 and 2030 were projected. Results from these projections shows that the appointment against already sanctioned posts may help in addressing the short-term need while comprehensive planning is required for long-term solution.

One of the major challenges faced in this study was obtaining reliable data on the annual health service activities from both facilities and programs. At present, the MIS includes only limited information on these services and even then, department-wise segregation is not possible in many cases. The hospital databases are not optimum and, again, department-wise segregation is not possible. Urgent attention should be given (both regarding infrastructure and HR) to this area to improve the management as well as the planning of HRH in Bangladesh.

Recommendations

A. Short-Term

- Fill up vacancies all sanctioned posts with priority so that the staff gaps relative to workload are improved. This will relieve workload pressure in understaffed facilities and allow the service providers to provide sufficient time for quality patient care.
- Create better equity in workload through intra and inter-facility reallocation of staff based on analysis of their workload.
- Shift some of the 'out of scope' tasks (support and additional activities) of direct health service providers. Specifically, shift activities carried out by nurses to other relevant staff to allow nurses to spend more time on patient care.
- Rationalization of support service staff in the public sector should also be given urgent attention. On a short-term basis, the vacancies within already sanctioned posts should be filled. In other cases, emergency problems should be addressed and solved by local arrangements.
- Infrastructure and equipment remaining unused for relatively simple maintenance problems should be given immediate attention as this has a major effect on the underutilization and underestimation of rational HR need of particularly technical HR categories in many cases. This is shown by irrationally higher WISN ratios for these categories.

B. Longer-Term

- Review and rationalize huge number of existing staff designations in public sector while revising the 'Table of organogram and equipment' of the health facilities, directorates and departments under MOHFW as per BHWS 2015 action plan.
- The revision of job description as per BHWS 2015 Action Plan should take into account the actual activities of each staff-category. The facility and program-wise placement of the HRH should be reviewed with more rational and ethically compatible assignment of tasks.
- For a more rational planning and monitoring of the public sector HRH, the existing MIS should be reviewed and restructured as soon as possible.

- Prioritization of preventive and promotive health care services need to be incorporated in all policies and plans related to HRH.
- Support services HR in the public sector should be given equal priority along with the direct health service providers.
- A proper HR surveillance system should be implemented with properly qualified MIS personnel at all facility and program levels
- Empirical evidence on the quantitative and qualitative impact of the implementation of HRH policies and plans should be generated through appropriately designed longitudinal studies.

Conclusion

Findings of the present study indicate that public sector health services in Bangladesh are operating with substantial shortages of human resources and the problem is particularly acute for preventive and promotive areas, as well as for support services. An additional challenge in this already constrained system is created by the fact that a substantial proportion of available working time of the major health care providers is spent on support or additional activities rather than on activities related to health care delivery. The findings also suggest that the distribution of HR in many cases is not equitable. Application of the WISN methodology may be useful in the rational planning of present and future HRH in Bangladesh.

1. Background and Context

Bangladesh aims to achieve Sustainable Development Goals by 2030 and is thereby committed to ensuring Universal Health Coverage (UHC). The Health, Nutrition and Population Strategic Investment Plan (HNPSIP) 2016-2021 aims to deliver an Essential Service Package (ESP) from district-level health facilities to community-level facilities through the available staff at each level to ensure equity and efficiency, guarantee universal access and improve the quality of HNP services. The health workforce is a central component of a well-functioning health system. Without adequate numbers of qualified personnel deployed at the right places to provide the needed health services, it will not be possible to achieve UHC. The proper management of the health workforce is also critical especially in context with resource constraints. Managers at both national and local levels face challenges with how they can best manage these costly but essential human resources so that they can achieve a more just distribution of workload and improve productivity.

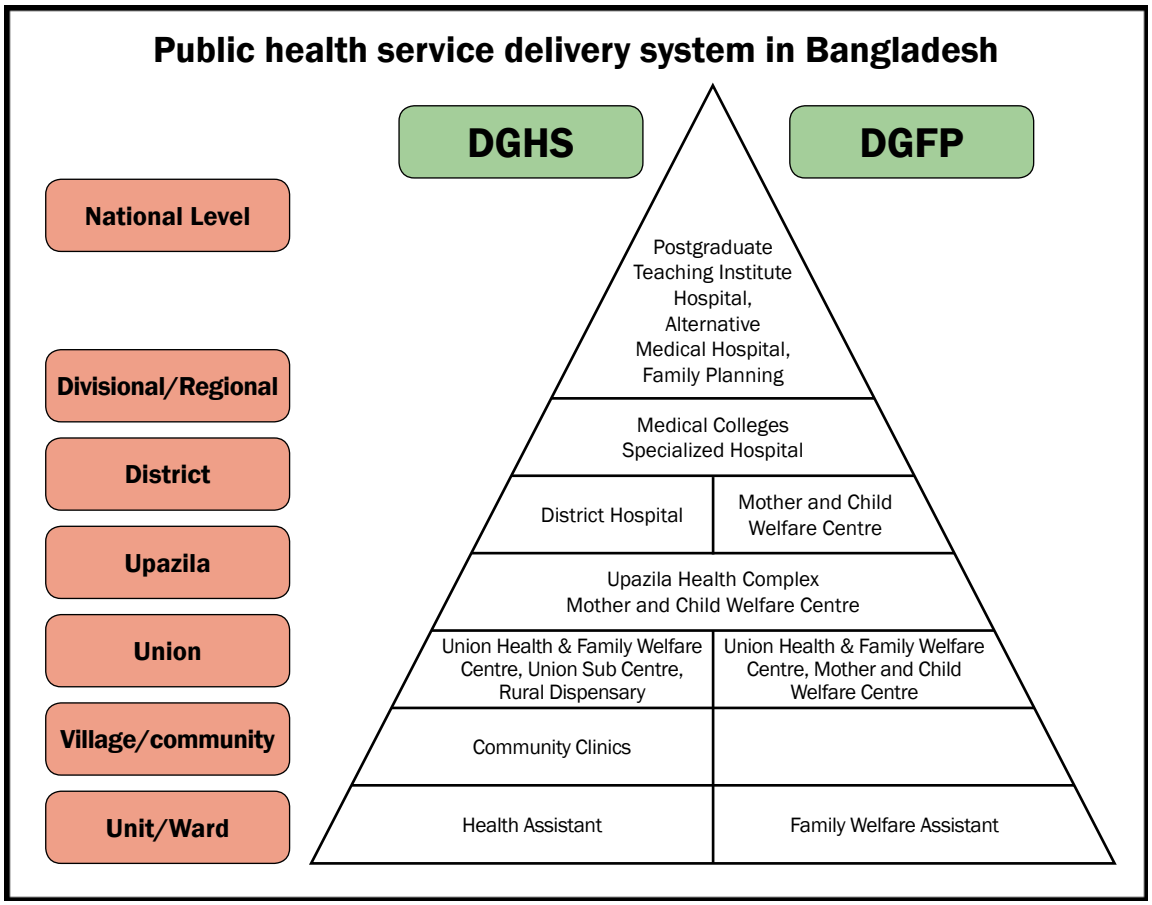
Given this context, the Bangladesh Health Workforce Strategy (BHFWS) 2015 recommends determining service level wise (primary, secondary, tertiary) health workforce needs with a focus on adopting a workload analysis approach so that the appropriate numbers and categories of health workforce personnel with the proper skill mix can be determined. In line with this strategy, the Human Resources Branch of the Health Services Division (former Human Resource Management Unit) of ministry of health and family welfare (mohfw) has taken the initiative to apply the Workload Indicators for Staffing Need (WISN) methodology developed by WHO at the public sector health service delivery systems in selected districts. The Human Resources Branch, MOHFW commissioned this study with USAID funded MaMoni Health System Strengthening (MaMoni HSS) project to develop a comprehensive picture of workload and better support policy making focused on health workforce planning, distribution and service efficiency.

Health service delivery systems in Bangladesh

The Government of Bangladesh (GoB) is committed to providing basic health services to its population as a constitutional obligation and this is reflected in various policies and programs implemented through stewardship of the MOH&FW. Bangladesh has a pluralistic health service delivery system with multiple actors comprised of health institutions and providers in the public, private for-profit, not for-profit, and informal sectors. MOHFW is the lead agency responsible for formulating policy, planning and decision making related to provision of health care. Private for-profit, not for-profit and informal sectors also play a role in the provision of health services at all levels of care. MOHW and its relevant regulatory bodies have a regulatory and monitoring role over the private for-profit and not for-profit sectors. The public sector health services include nearly the entire spectrum of health care i.e. curative, preventive, promotive, and rehabilitative services. On the other hand, the for-profit actors provide mainly curative services and the not for-profit actors provide mainly preventive and basic care with some advanced curative care to a limited extent. MOHFW through its two directorates

[1]Bangladesh Essential Health Service Package (ESP), MOH&FW, GoB, August 2016
[2]Bangladesh's Constitution of 1972 (Reinstated in 1986, with Amendments through 2011), PDF generated: 14 Apr 2014

- Health and Family Planning, manages public sector health services ranging from primary to tertiary care (excluding urban primary care) and stretches from the central level to the community level, covering both rural and urban areas. Although the MOHFW is the leading agency for institution-based health care delivery at the national level and in rural areas, primary health care in urban areas is the responsibility of respective local government institutions (municipalities and city corporations). This is housed under the Ministry of Local Government, Rural Development and Cooperatives.[3] The facilities created by the private sector are confined to different types of clinics, hospitals, pharmacies, and practicing chambers of formal and informal healers.



HRH situation in Bangladesh

Bangladesh was categorized in the list of severe health workforce shortage countries in the World Health Report of 2006 as Bangladesh falls below the critical threshold of 22.8 physicians, nurses and midwives per 10,000 population. According to the 2014 World Health Statistics, the present status in Bangladesh is 5.8 physicians, nurses and midwives per 10,000 population, which is far below the threshold level. This is the lowest threshold level among WHO South East Asian Regional countries.

[3]Bangladesh Health System Review, Health Systems in Transition Vol. 5 No. 3 2015, WHO 2015
[4]World health report 2006 – working together for health., WHO
[5]World Health Statistics, WHO, 2014
[6]Regional workshop Summary Report , WHO SEARO , April 2016

By the end of 2003, the formal sub-sector HRH was around 120,000 which increased to about 350,000 in 2014. This was an increase of about 185% in the context of a 15% increase in population during that period. A substantial proportion of this increase can be attributed to the relatively recent addition of about 12000 CHCPs in the pool.

At least 45% (155,000) of the 350,000 HRH in the formal sub-sector (i.e. organized and registered providers, public or private) at the end of 2014 were employed by the two major directorates of the MOHFW. Around 10% (35,000) of them are Alternative Medical Care (AMC) practitioners (practicing some form of traditional medicine like Aurvedic, Unani or homeopathic medicine) of whom mostly work for-profit. For-profit providers form a substantial bulk (45% or 160,000) of the provider workforce in urban areas, while not-for-profit providers comprise a smaller proportion of the provider workforce. As per information provided by the Village Doctor Associations, about 1.4 million of these physicians are working informally (i.e. not registered by any recognized authority) across the country as for-profit providers.

The qualified providers related to conventional medicine (physicians, nurses, and dentists) are mostly located in the urban areas whereas paramedics and outreach workers are deployed in rural primary healthcare facilities (Bangladesh Health Watch Report 2007). In all HRH categories except for nursing services, males dominate the workforce.

Among the Ministries, MOHFW plays a central role in the formulation of plans, policies and strategies regarding HRH and is also responsible for staffing healthcare facilities and programs in rural areas. In urban areas, MOH&FW is responsible for HRH in selected healthcare facilities at the secondary and tertiary levels. An estimated 35% (25,207) of the total medical doctors are employed by MOHFW and only 3% (1,858) work under other Ministries including Social Welfare, Local Government, Cooperatives, Railway, Women & Children Affairs, Defense, and others (HRMU, 2013).

2. Objectives

The objectives of this study are:

1. To understand the existing workload of different categories of health workforce personnel engaged in providing preventive, promotional and curative services both at health facilities and at the community level;
2. To identify the gaps and inequalities in distribution between the existing and required number of different categories of staff involved in provision of essential service package (esp) through the four tiers of service delivery;
3. To recommend and make projections for health workforce needs within public sector healthcare facilities at the district level and below.

3. Methodology

3.1 Overview of WISN Method

The present study applied the WHO recommended WISN methodology with few adaptations relevant to the workforce context in Bangladesh. The WISN method is an analytic human resources planning and management tool. It calculates the number of health workers of a particular category required in a given health facility based on workload. The WISN method also provides a proxy measure, called the WISN ratio, to assess workload pressure on health workers. The WHO developed and published the WISN method initially in the 1998 and in 2010, WHO developed a revised WISN toolkit and made it available online (WHO 2015).

The WISN methodology identifies the main workload components of a staff category (the health service activities this cadre performs in its daily work) and then defines the standard time it takes to perform this activity. Therefore, differences in the services provided and their complexity at different facility levels are taken into account. Calculations of the required number of staff in a cadre in a particular health facility are based on the workload with which the staff has to cope.

This method can be used to calculate the staff requirement for a single staff category working in one type of health facility. It can also be utilized to estimate the required number of multiple categories of staff working in a range of facility types. The calculations incorporate nationally available data on current workloads to minimize the need for primary data collection. The WISN method can also use estimates of future workload to calculate how many staff would be required.

Table 1 : Steps of applying the WISN method

Step	Activity	Details
1	Determine priority cadres and facilities	Cadres, types of facilities, and administrative units (single facility, district, region or country) to which the WISN method will be applied.
2	Estimate available working time (AWT)	The time a health worker has available in one year to do his or her work, taking into account authorized and unauthorized absences.
3	Define workload components	There are three types of workload components:
		Health service activities: Performed by all members of the staff category, and regular statistics are collected on them (e.g., admitting patients).
		Support activities: Performed for all members of the staff category, but regular statistics are not collected (e.g., staff meetings).
		Additional activities: Performed by only certain staff (not all of them), and regular statistics are not collected (e.g., writing annual reports).
4	Set activity standards	The time necessary for a well-trained, skilled, and motivated worker to perform an activity to professional standards in the local circumstances.
5	Establish standard workloads	The amount of work within a health service workload component that one health worker can do in a year.
6	Calculate allowance factors	**Category allowance factor (CAF):** A multiplier used to calculate the total number of health workers required for health service and support activities.
		Individual allowance factor (IAF): The staff requirement to cover additional activities of certain cadre members.
7	Determine required staff numbers	Total staff requirement = [staff requirement of all health service activities times category allowance factor] plus [individual allowance factor].
8	Analyze and interpret WISN results	WISN results analyzed in two ways:
		i. Difference between the current and required number of staff
		ii. WISN ratio (ratio of current to recommended staff), which is a proxy for workload pressure. (The lower the WISN ratio, the higher the workload pressure.)
9	Validate activity standards and results	Activity standards and electronic databases validated for correctness by expert group and steering committee. If necessary, steps 7, 8, and 9 are repeated.

3.2 Application and customization of WISN method in the present study

The study applied the who-recommended wisn methodology with a few adaptations relevant to the workforce context in bangladesh.

Technical Advisory Group (TAG): At the beginning of the study, HRM unit of MOHFW formed a TAG chaired by Additional Secretary (Admin)'s Line Director HRM and included members from key departments of MOH&FW, professionals and key stakeholders. The TAG provided guidance and advice on technical issues, methodology, tools, and coordinated efforts to expedite the study. Initially the TAG consisted of thirteen members and was later revised to fifteen members to include more stakeholders (Annex I).

Study Team: The team was responsible for implementing the WISN process, consisted of a Team Leader, Deputy Team Leader, Associate Consultant, two Analysts, and 22 data collectors. The study team conducted discussions with experts at the national level and conducted interviews with experienced managers and service providers at different levels of facilities to define the workload components and set appropriate and acceptable activity standards in this context.

All steps of the WISN method mentioned above (Table 1) were followed in the study with a few adaptations as follows:

I. The study aims to provide an evidence base for developing a comprehensive health workforce plan in line with the strategic intervention (1.1) of Bangladesh Health Workforce Strategy 2015. To be as comprehensive as possible, almost all staff categories working in the public health sector were included in the study. Nearly one thousand types of staff designations were found in the public health system and these designations were grouped down to a manageable number of sixty seven (67) Statt categories (Annex II).

Ii. The study included public health care facilities from all three levels (primary, secondary and tertiary) as well as community level health workers.

Iii. The study was designed in two phases of field level data collection. In the first phase, workload components were defined and average standard times required for specific services delivered at different facilities and community levels were estimated after discussions with experts at the national level and after interviews with experienced managers and service providers at various facilities. In the second phase, workload components and standard timings were further refined through sharing results from the first phase to key persons at different facilities. During this phase, their comments were incorporated and approved by relevant respondents from the first phase and were matched to the results from observations. Additionally, in the second phase, the latest annual service data was collected from MIS reports, relevant registers and/or annual reports from the facilities included in the study.

Iv. The WHO's WISN manual does not mention anything regarding administrative and support services staff who are also very crucial human resources for any health care facility/program to deliver quality services. Furthermore, no published literature could be found relating to this issue. This study designed and applied

a modified approach for these categories of staff. Despite practical difficulties in estimating activity standards for these categories, the team utilized an alternate approach to assess their standardized needs. This approach was primarily based on the perceptions of the management personnel at specific facilities/ programs in relation to the total health service needs. A detailed calculation is provided in Annex III. Thus, information in the present survey records only the ideal number of each category of staff that will be required if a facility or program should operate optimally.

V. So far, the WISN method has only been applied for the health workers and staff working at the facility level. This study also included public sector community level health workers.

3.3 Study Area

The study was conducted in two selected districts Kushtia and Brahmanbaria (B. Baria) and a medical college hospital. Study districts and sites selected purposively using a model-based approach after a thorough discussion with the TAG. A Model was defined as a district or medical college hospital, which overall, has relatively better performance as evidenced by certain performance indicators such as Average daily OPD visits, total patient admission, bed occupancy rate, number of deliveries, number of operations available in the MIS. The criteria for the selection are detailed in Annex III. The rationale for adopting this approach is its practical applicability during future implementation of the recommendations through advocacy and administrative efforts. Since data generated from these areas will lead to direct evidence for the possibility of providing optimum care to the population within the realities and limitations of Bangladesh, it can always be argued that performance in other areas of the country can be improved to these levels even within the limitations of HRH and logistics in the country. If the performance of the model areas are further improved through additional support of HRH (as per WISN study results), they can continue to serve as the examples to guide HRH planning for the other areas. The selected facilities and sites were are as follows:

Table 2: Types and number of study facilities

Type of facility	Number of facilities	Selected Site
Medical College Hospital (MCH)	1	Rajshahi Medical College Hospital
District Hospital (DH)	2	Kushtia General Hospital, Brahmanbaria District Sadar Hospital
Maternal and Child Welfare Centre (MCWC)	2	Kushtia Sadar MCWC, Brahmanbaria Sadar MCWC
Upazila Health Complex (UHC)	4	Daulatpur UHC, Kumarkhali UHC, Nabinagar UHC, Sarail UHC
Union Health & Family Welfare Centre (UH&FWC)	4	Prayagpur , Kaya, Bitghar, Uttar Panisar
Union Sub Centre (USC)	4	Hogalbaria, Jagannathpur, Jinodpur and Shahbajpur
Community Clinic (CC)	4	Kamalpur CC, Jaynabad CC, Chouria CC, Aminpara CC

In addition to the facility based staff, community level health workers such as Family Welfare Assistants (FWA), Health Assistants (HA) of the unions where selected UHFWC/USC and CCs are situated were included.

3.4 Development of tools and pretesting

With a draft prepared by the study team, a number of resource persons in relevant disciplines were consulted to define the workload components with approximate timing. Based on these components, questionnaires and other data collection forms for individual staff categories were developed to be used in the field. Pretesting of the data collection tools was conducted in Savar and tools were adjusted accordingly. Separate checklists were developed for observation in the second phase of the study where experience from the first phase was incorporated.

3.5 Training on WISN and data collection tools

Just before the initiation of field work for the present study, the HRM Unit (now HR Branch) of MOHFW in collaboration with WHO Country Office, Bangladesh, organized a training on the WISN methodology. Dr Gulin Gedik from WHO-EMRO facilitated the training. Study team members, district- and upazila-level health and family planning managers (Civil Surgeons, Deputy Directors Family Planning, Upazila Health and Family Planning Officers) from study districts attended the training. Following the training, data collectors (including interviewers) were trained on the WISN method and data collection tools in two phases – once in December 2016, prior to Phase I data collection and again in April 2017 before phase II data collection. In total, 22 data collectors took part in Phase I and 24 data collectors took part in Phase II of the field level data collection.

3.6 Data collection

Interviewers were divided into groups and each group was assigned to a specific site (Annex IV). Data was collected through in depth interviews. During Phase I, 250 individual staff from 55 categories of staff were interviewed. In Phase II, some of those staff categories were observed. The contact details of each staff were noted and, if necessary, confusion was further clarified over telephone. In addition to specific information related to various activity components (as mentioned in the questionnaire), other information which may have some relevance to the study were also noted. Some of the information which, more appropriately, are targeted in the second phase, were also noted to facilitate the conversation in the first phase. For example, most of the staff found it difficult to immediately determine the standard timing for a specific activity. However, when the conversation started with how

Timeline of Data collection		
	District	Time line
Phase I	Kushtia	Last week of December 2016
	Rajshahi	2nd week of January 2017
	Brahmanbaria	4th week of of January 2017
Phase II	Brahmanbaria	Last week of April 2017
	Kushtia	Last week of April 2017
	Rajshahi	1st week of May 2017

much time they presently need to perform certain activities and, in their opinion, what amount of time would be optimal, extraction of information became much easier.

For staff in administrative/support services, a different approach was utilized. Relevant Department/Unit Administrator(s) were asked to discuss the number of individual categories of staff which (in their opinion) would be required to run the facilities optimally (in the Bangladesh context) if all the physical and equipment infrastructure was functioning and if all the sanctioned posts in other staff categories were filled.

3.7 Data sources of annual service statistics

The recent focus of the GoB on information management through digitalization has made a significant impact on the heath sector. However, root level record management is still far from functioning at the optimal level. Study collected annual service data from following sources of present MIS:

Table 3: Annual service data sources

Annual service data	Data Source	Comments
Total Outpatient	Computer Database of Hospital, Register Book, Statistical Yearbook of MCH	Out- patient number segregated by departments was not available
Total Inpatient Admission	Computer Database of Hospital, Register Book, Statistical Yearbook of MCH	In-patient number segregated by departments was not available
Antenatal Visits	Computer Database of Hospital, Register Book, MIS	
Postnatal Visits	Computer Database of Hospital, Register Book, MIS	
Normal Vaginal delivery	Computer Database of Hospital, Register Book, MIS	
Caesarian Sections	Computer Database of Hospital, Register Book, MIS	
Total Discharge	Computer Database of Hospital	Number segregated by departments was not available
Total Deaths	Computer Database of Hospital	Number segregated by departments was not available
Emergency Patients	Register Book of Hospital	
Normal Delivery	Computer Database of Hospital, Register Book in some cases	
OT (Major & Minor)	Computer Database of Hospital, OT Register of Hospital	
Family Planning services	MIS (MIS 2,3)	
IMCI	MIS, Computer Database of Hospital	
Health Education	MIS, Register Book of Community level facilities	
Vaccination	EPI Record	
Diagnostic Tests	Register Book of respective department	Compiled data was not available, counted from registers

The number of health service-related activities (particularly for preventive and promotive services) are left out. Also, there is a lack of discipline-specific data, even at the secondary and tertiary levels. This makes it very difficult to design HR planning for these levels. Thus, the structure and components of the MIS need to be revisited and revised. Furthermore, appropriate HR for managing MIS needs to be included at upazila level.

3.8 Supervision and quality control

Each subgroup of interviewers had a subgroup leader and activities of the subgroups were directly supervised by senior members (the Team Leader, Deputy Team Lead and Associate Consultant of the Study Team). In addition, the MaMoni HSS team monitored subgroup activities. The Deputy Secretary and Program Manager in the HRM unit of MOHFW also visited one location to observe data collection activities as a representative of TAG. The quality of the data was checked by the senior members of the study team and inconsistencies were resolved by selected interviewer(s) revisiting locations or by telephone communication.

3.9 Data Analysis

Data collected from the interviews was compiled in Excel and made compatible to the WISN calculation requirement in another sheet. The findings were further summarized in a third Excel sheet.

For the direct health care providers (physicians, nurses, pharmacists, community workers, etc.), data were analyzed as per the WISN user's manual to calculate workload and required numbers of staff members.

The staff requirements for administrative and support services were obtained from the optimum number as determined by the experienced managers of specific facilities/ programs in relation to its total health service needs. A method of calculation has been devised to develop a tool for estimating the Administrative and Support service Human Resources (ASHR) need at different levels of facilities. The method is as follows:

Step 1: Total Health Service Hours (THSH) in a specific facility was calculated avoiding duplications (eg. physicians and nurses attending the same patient).

Step 2: Total Available Working Time (AWT) of the particular administrative/support staff category was calculated by multiplying AWT of one staff by the optimum number required (as found in the present study) for that particular facility. This was termed as Support Service Available Working Time (SSAWT).

Step 3: Administrative and Support Staff Allowance Factor (ASAF) for the entire facility was then calculated from the ratio of SSAWT and THSH. This facility-level specific ASAF may be used to calculate administrative/support service related HR requirements in other facilities.

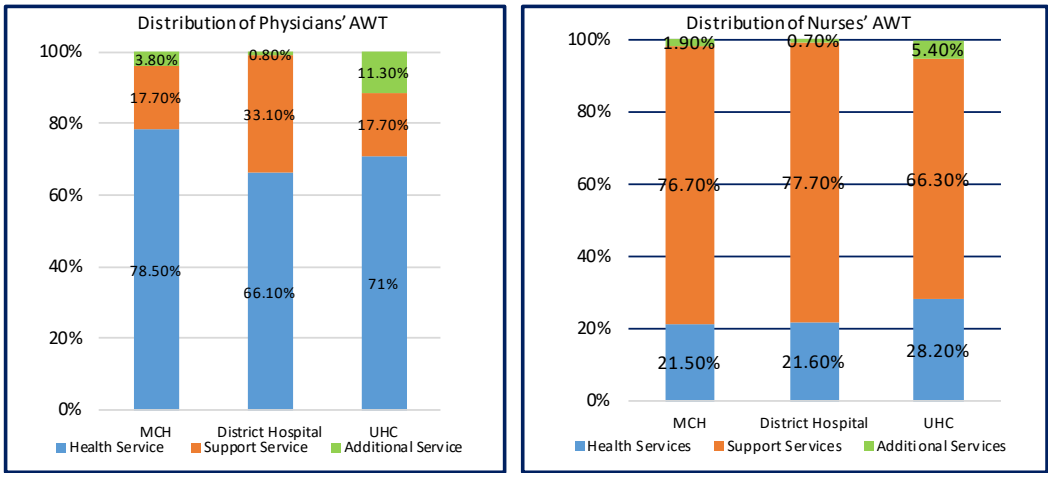
An example of administrative/support staff requirement calculation using ASAF for a District Hospital level is shown in Annex V.

4. Results

4.1 Workload components and activity standards of direct healthcare providers

Main activities of each staff category that take up most of their daily working time were allocated into three types of workload components: health service activities, support activities and additional activities as defined by WISN manual. Analysis of the three kinds of workload components of direct health service providers, particularly physicians and nurses, revealed that a substantial proportion of their available working time (AWT) was spent on support and additional activities. Many of these activities are beyond the scope of their specific job assignments. Physicians at medical college hospital, district hospitals and Upazila Health Complexes (UHC) spend 22%, 34% and 29% of AWT (Figure:1) on support and additional activities like meetings, medico-legal procedures, testifying at court, issue injury certificates, day observation events, etc. In case of nurses, support and additional activities comprise major proportion (72%-78%) of their AWT (Figure: 1) at all three types of facilities (MCH, DH, UHC). This signifies that they spend much less of their AWT for the health service activities they are supposed to be conducting. The workload component and Activity Standards by category of staff are given in Annex VI.

Figure 1: Comparative analysis of health service, support and additional workload components (% of total Available Working Time) for physicians and nurses at different types of facilities



* DH-B, **UHC-C

Physicians

All physicians with various Medical Officer Designations (eg. RMO, IMO, EMO, etc.) were placed in one group (Physicians) as their responsibilities are interchangeable. Attempts have been made to set the Activity Standards for the same workload components to make practical application easier. For example, the OPD consultation time of nine minutes per patient for physicians indicates the standard for any physician whether s/ he is an MO, Assistant Surgeon, RMO, or Assistant Registrar working in any level facility. Though it seems that time will vary at different facilities (e.g. among Upazila Health Complex, District Hospital and Medical College Hospitals), in depth discussion with the providers revealed that time taken for diagnosis of relatively complicated patients by interpreting investigation results in the medical college hospitals are offset by the time taken by the physicians to make a clinical decision at the lower level facilities.

Table 4: Workload components and activity standards of physicians at Upazila Health Complex and District Hospital

A. Health Service Activities		Activity Standard	
Sl No	**Activity Name**	**Upazila Health Complex (UHC)**	**District Hospital (DH)**
1	**Out-Patient**		
	General Consultancy	9 min/pt	8 min/pt
	Antenatal Care (ANC)	11 min/pt	11 min/pt
	Postnatal Care (PNC)	11min/pt	11 min/pt
	IMCI	5 min/pt	5 min/pt
2	**Inpatient Service**		
	Routine clinical round	3 min/pt	3 min/pt
	Patient management /individual round	8 min/pt	8 min/pt
	Minor procedures (like dressing, NG tube/ Ryle's tube insertion, catheterization etc.)	18 min/pt	18 min/pt
	VIA		5 min/pt
	Patient discharge	5 min/pt	5 min/pt
	Death certificate	5 min/pt	5 min/pt
	Normal Delivery	30 min/pt	30 min/pt
3	**OT**		
	Preparation for OT	15 min/pt	15 min/pt
	Operation-major (including Caesarian Section)	60 min/pt	60 min/pt
	Operation-intermediate	45 min/pt	45 min/pt
	Operation-minor	20 min/pt	20 min/pt
4	**Emergency**		
	Emergency case management	14 min/pt	14 min/pt

B. Support Activities	C. Additional Activities
Attending staff meeting	To monitor and supervise the filed level activities eg. EPI, Vit-A and Deworming Campaign etc.
Supervising ICT, NCD, IMCI activity	Conducting training program
Injury certificate issue	Attending monthly meeting at Civil Surgeons Office and other meetings (UNO, MP)
Court attend	Coordination meeting with field level workers
Exam duty	Seminar/ Workshop/Conference
Supervising MATS intern	Duty Roaster preparation
Monthly Reporting	Disaster management
National Days Celebration	Monitor proper waste management activities
Participate in training program	Visit to Union Sub – centre/ Community Clinic
Clinical Meeting	Attestation
	Postmortem and medico legal procedures
	Register maintain

Consultants

Consultants' available working time varied from 20—50% according to their involvement in teaching. Activity Standards for OPD consultation by Consultants have been addressed for each specialty. In addition, time of operation (major, intermediate, minor) also varied according to specialty. For example, standard time for a 'Major OT' case in general surgery was 60 minutes per patient, whereas in orthopedic surgery and ENT surgery, the standard time was 90 minutes per patient. In calculating ward round hours, the consultant was considered to give round in 50% of their week days.

Nurses

Nurses spend a significant amount of their AWT in routine bedside care of the patients. Bedside care includes checking vital signs (temperature, pulse, BP), testing blood glucose and urine, maintaining input output charts, providing routine medications, etc. There are no service statistics of these activities. Therefore, all of these activities were grouped under routine bedside care of patients. A proportion of patients require special care like suction, nebulization, oral care, position change, etc. Time required for care dependent patients was determined, but could not be utilized during workload calculation due to unavailability of segregated data at the facilities.

Sub Assistant Community Medical Officers (SACMOs)

SACMOs are posted at both at UH&FWC/USC and UHC. Generally, at the union level, there is one SACMO per UH&FWC/ USC and at the upazila level, two per UHC. Many union level SACMOs were found deputed at UHC. At UHC, SACMOs are supposed to support physicians in providing services, but it was observed that, in many cases, they were performing the job responsibilities of a physician. The activities of different workload components varied according to facilities. For example, SACMOs have more support and additional activities at the union level than at upazila level. Though the activities are different, the time for OPD consultation is 10 minutes per patient at both the at the union and upazila levels.

Community-level health workers

Family Welfare Assistants (FWA) and Health Assistants (HA) are based at the community level. Each FWA is assigned to a specific number of eligible couples in a union. Each HA is assigned to a specific number of households in a ward. Therefore, while setting the activity standard, time per household visit was considered in place of time per patient.

4.2 Allowance factor for administrative and support staff

A major initiative was taken in the present study to set the activity standards for administrative and support services HR at different levels of facilities. In the past, WISN studies did not include these categories of staff. The present study revealed that HR crisis in support services are equally (if not more) responsible for the present challenges in the health sector. Setting activity standards in line with those of the direct health care providers was found to be impractical during the study. First, the activities were highly heterogeneous and, in many cases, unpredictable. Second, no information regarding their services is available in MIS. Accordingly, a simpler method was devised by which Support Service Allowance Factor (SSAF), expressed

as a percentage of the total AWT of a category of staff in relation to the total health service demand in a standardized setting, was developed. It should be noted that in contrast to the general nature (applicable for all levels) of the activity standards of the direct healthcare providers, the standards for the support services are level-specific as the SSAF may vary substantially between different levels of facilities. The facility level wise SSAF, as listed in Annex III, can be used to calculate the category-wise administrative/support staff requirement of a facility once total health service hours are known.

4.3 HRH requirement based on current workload

In WISN method, workload pressure of a particular staff category in a given facility is assessed by using a proxy measure called 'WISN ratio'. A WISN ratio of one (1.0) means current staffing is in balance with the staffing demands of a health facility's workload. A WISN ratio of more than one indicates overstaffing in relation to the workload. Conversely, a WISN ratio of less than one indicates that the current number of staff is insufficient to cope with the workload. The smaller the WISN ratio, the greater the work pressure. Severity of shortage or surplus can be measured by the distance from 1.0.

Two types of WISN ratios were calculated in the present study: i) WISN ratio against current number of staff working at the facility (against sanctioned posts as well as those made available by local arrangement or by the way of task assignment and b) Ratio against sectioned post only. WISN result is facility specific. For descriptive purpose one from each type of facility is shown in the result section and other facility results are attached in Annex VII. As per suggestion form TAG, in the result section the facilities included in the study are coded (eg. DH-A, DH-B, UHC-A etc.).

A. Human resources requirement based on workload by type of facility

District Hospital (DH)

A severe shortage of Consultants was found in almost all specialties except Anesthesiology, Pediatrics and Radiology & Imaging. The WISN ratio for physicians and nurses were 0.58 and 0.43 respectively also indicating high workload pressure. Workload pressure of nurses was improved to some extent due to the posting of new nurses at District Hospitals after December 2016. The WISN ratio for different types Medical Technologists (Laboratory, Radiology, ECG and Dental) indicate they are either underutilized or have a nearly normal workload. Workload of Consultant Ophthalmology and Dental, Nutritionist, Pharmacist Medical Technologist- Physiotherapy could not be assessed due to unavailability of annual service statistics.

Table 5: Required number different categories of staff and WISN Ratio in a District Hospital (DH-A)

Staff Category	Current Number	Required Number, Based on WISN	WISN Ratio	Sanctioned Number	WISN Ratio as per Sanctioned
Consultant Anesthesiology	2	2	1.28	2	1.28
Consultant Cardiology	2	8	0.23	2	0.23
Consultant ENT	1	5	0.21	2	0.43
Consultant Medicine	2	4	0.51	2	0.51
Consultant Obs. & Gynae	1	3	0.40	2	0.80
Consultant Ophthalmology*	1			2	
Consultant Orthopedics	2	5	0.45	2	0.45
Consultant Paediatrics	1	1	1.39	2	2.78
Consultant Radiology & Imaging	2	1	4.38	2	4.38
Consultant Dermatology	1	3	0.35	1	0.35
Consultant Surgery	2	5	0.44	2	0.44
Dental Surgeon	1			1	
Physicians	29	50	0.58	33	0.66
Nurse (before Dec. '16)	66	153	0.43	166	1.09
Nurse-DSH (from Dec'16)	151	153	0.99	209	1.37
Nutritionist	1			3	
Pharmacist	1			3	
Medical Technologist- ECG	3	2	1.38	4	1.84
Medical Technologist- ECG	1	2	0.63	1	0.63
Medical Technologist-Dental	1	2	0.77	1	0.77
Medical Technologist-Physiotherapy	1			1	
Medical Technologist-Radiology &Imaging	1	1	1.10	2	2.20

*Annual service statistics not available

Maternal and Child Welfare Centre (MCWC) at District Level

In MCWCs, one physician is adequate to manage the workload. Though the WISN ratio of Family Welfare Visitors (FWV) at MCWCs indicate nearly normal workload (0.83-0.93) but in depth discussion revealed that a number of FWVs from union level facilities (UH&FWC) were deputed at MCWCs to manage the workload pressure. This might result in a service delivery gap at their original place of posting at UH&FWCs which could not be explored as those facilities were not included in the study.

Table 6: Required number and WISN Ratio of different staff categories at district level MCWCs

Facility	Current Number	Required Number, Based on WISN	WISN Ratio
Staff Category : Physician (MO-Clinic/ MO-MOM-MCH FP)			
MCWC A	1	1	1.17
MCWC B	2	1	2.36
Staff Category : Family Welfare Visitor (FWV)			
MCWC A	4	4	0.93
MCWC B	5	6	0.83

Upazila Health Complex (UHC)

More than half (57%) of required physicians (Medical Officers) are working at UHCs. All the sectioned Consultant posts at UHCs were found vacant or they were deputed to other facilities. Filling up the Consultant posts will reduce the workload of physicians and also improve availability of discipline-specific services. There is a severe shortage of nurses even after the posting of new nurses in December 2016. Only Medical Technologists in the Dental and Radiology Departments were found as under loaded.

Table 7: Required number and WISN Ratio of different staff categories at Upazila Health Complex (UHC- C)

Staff Category	Current Number	Required Number, Based on WISN	WISN Ratio	Sanctioned Number	WISN Ratio as per Sanctioned Number
Consultant-Anesthesia	0	Post Vacant		1	
Consultant Obs.& Gyn	0			1	
Consultant-Medicine	0			1	
Consultant-Surgery	0			1	
Dental Surgeon	1	1	6.39	1	6.39
Physician	6	9	0.61	6	0.41
SACMO	2	3	0.65	2	0.65
Nurse	10	33	0.30	12	0.36
Medical Technologist-Dental	1	1	5.00	1	5.00
Medical Technologist-Laboratory	1	4	0.47	2	0.94
Pharmacist	2	Post Vacant		2	
Medical Technologist-Radiology-Imaging	1	1	9.16	1	9.16

B. Human Resources requirement by staff category

Physicians and Consultants

There is shortage of physicians in all facilities except in one UHC. There are inequities in workload among physicians working at both different-level facilities and same-level facilities. WISN ratio for physicians ranged between 0.36- 0.58 at districts hospitals and 0.4-1.21 at Upazila Health Complexes. There are a considerable number of Physicians and Consultant posts that are vacant or deputed to other facilities. Almost all the Consultant posts at UHCs were vacant. If all posts are filled, the ratio would improve. However, the ratio would still be less than one, which indicates a shortage.

Table 8: Required number and WISN Ratio for Physicians at different Facilities

Facility	Current Number	Required Number, Based on WISN	WISN Ratio	Sanctioned Number	WISN Ratio as per Sanctioned Number
UHC A	6	15	0.40	7	0.47
UHC B	13	11	1.21	7	0.65
UHC C	9	15	0.61	6	0.41
UHC D	7	13	0.55	8	0.62
DH A	27	75	0.36	30	0.40
DH B	29	50	0.58	33	0.66
MCH	149	167	0.89	166	0.99

At UHCs almost all the Consultant posts found vacant or deputed to other facilities. At District and Medical College Hospitals shortage of consultants was observed in almost all the specialties. Workload pressure varied from facility to facility even among the same category of Consultants. High workload observed among Consultant- Medicine (WISN ratio ranged 0.06- 0.5), Surgery (0.18-0.46), Obstetrics & Gynecology (0.33-0.4) and Orthopedic (0.16-0.45).

Table 9: Required number and WISN ratio for Consultant at District and Medical College Hospital

Health Facility	Current Number	Required Number, Based on WISN	WISN Ratio	Sanctioned Number	WISN Ratio as per Sanctioned Number
Consultant- Medicine					
DH A	1	18	0.06	2	0.11
DH B	2	4	0.51	2	0.51
MCH	12	23	0.35	12	0.35
Consultant- Surgery					
DH A	2	11	0.18	2	0.18
DH B	2	5	0.44	2	0.44
MCH	6	12	0.46	6	0.46
Consultant - Obstetrics and Gynecology					
DH A	2	6	0.33	2	0.33
DH B	1	3	0.40	2	0.80
MCH	7	13	0.40	7	0.40
Consultant- Anesthesiology					
DH A	2	3	0.76	4	1.52
DH B	2	2	1.28	2	1.28
MCH	10	7	1.39	10	1.39
Consultant - Paediatrics					
DH A	2	3	0.67	2	0.67
DH B	1	1	1.39	2	2.78
MCH	7	17	0.40	7	0.40
Consultant-Orthopedics					
DH A	1	3	0.39	2	0.78
DH B	2	5	0.45	2	0.45
MCH	1	6	0.16	1	0.16
Consultant - ENT					
DH A	1	2	0.64	1	0.64
DH B	1	5	0.21	2	0.43
MCH	3	9	0.33	3	0.33
Consultant- Cardiology					
DH A	2	3	0.73	2	0.73
DH B	2	8	0.23	2	0.23
MCH	4	2	2.21	4	2.21
Consultant- Ophthalmology					
DH A	1	2	0.66	2	1.32
DH B	1			2	
MCH	8	11	0.69	8	0.69
Consultant- Dental					
DH A	0	2	0.90	2	0
DH B	1			1	
MCH	3	4	0.72	4	0.96

Nurses

A severe shortage of nurses was found in all facilities, the WISN ratio was 0.5 or less in most of the facilities. This indicates that most of the facilities are managing the workload with half or less than half of required number. Though new recruitment and posting of nurses by government resulted in increase in number of sectioned posts as well as placement of nurses all the facilities except one district hospital from December'16. The current study used annual service data of the previous year (January-December 2016) for calculation of staff requirement, therefore new nurses were not considered in calculating WISN Ratio. New deployment of nurses might result in improvement of workload in coming years.

Table 10: Required number and WISN Ratio for Nurses at different Facilities

Facility	Current Number	Required Number, based on WISN	WISN Ratio	Sanctioned Number	WISN Ratio as per Sanctioned Number
UHC A	10	19	0.52	10	0.52
UHC B	7	13	0.54	10	0.77
UHC C	10	34	0.30	12	0.35
UHC D	17	24	0.71	25	1.05
DH A	163	328	0.50	184	0.56
DH B	66	153	0.43	166	1.09
MCH	394	1084	0.36	404	0.37

Family welfare visitors (fwvs)

Among the six Union Health and Family Welfare Centres (UH&FWC), FWVs at three facilities are overloaded, while in the other three facilities, FWVs are underutilized.

Table 11: Required number and WISN Ratio for Family Welfare Visitors (FWVs) at different Union level facilities

Facility	Current Number	Required Number, Based on WISN	WISN Ratio
UH&FWC A	1	1	1.78
UH&FWC B	1	2	0.60
UH&FWC C	1	2	0.57
UH&FWC D	1	2	0.61
UH&FWC (USC) E	1	1	1.25
UH&FWC (USC) F	1	1	2.00

Sub-Assistant Community Medical Officers (SACMO)

In four of the union level facilities, there are shortages of SACMOs. Only one UH&FWC shows an adequate number. The remaining three centres do not have any SACMOs in spite of having a sanctioned post.

Table 12: Required number and WISN Ratio for SACMOs at different Union level facilities (UH&FWC /USC)

Facility	Current Number	Required Number	WISN Ratio
UH&FWC A	0	1	0
UH&FWC B	1	2	0.76
UH&FWC C	1	1	1.25
UH&FWC D	1	2	0.82
UH&FWC (USC) E	1	2	0.52
UH&FWC (USC) F	1	2	0.43
UH&FWC (USC) G	0	-	-
UH&FWC (USC) H	0	-	-

Family Welfare Assistants (FWA)

Shortage of FWAs were observed in six unions and balance in only one union out of the seven unions included in the study. Fulfilling all sanctioned posts for FWA in those six unions would balance the load in three unions and reduce the load in the remaining three unions. Therefore, recruiting new FWAs to fill vacant posts is the only solution that will improve the situation to a considerable extent.

Table 13: Required number and WISN ratio for Family Welfare Assistants (FWA) at different Unions

Union	Current Number	Required Number, Based on WISN	WISN Ratio	Sanctioned Number	WISN Ratio as per Sanctioned Number
Union A	4	6	0.68	5	0.85
Union B	3	5	0.56	6	1.11
Union C	5	7	0.70	7	0.99
Union D	7	7	0.50	7	1.08
Union E	5	10	0.51	8	0.82
Union F	2	5	0.42	5	1.04
Union G	4	4	1.00	6	1.50

Community Health Care Providers (CHCP)

The WISN ratio indicates that CHCPs are overloaded in all of the community clinics except for one. A workload component analysis revealed that CHCPs are providing health services to a large number of general patients and children under-five. This impact their original role which was to raise awareness and counsel patients.

Table 14: WISN Ratios for Community Health Care Providers (CHCPs) at different Community Clinics

Facility	Current Number	Required Number, Based on WISN	WISN Ratio Number
Community Clinic A	1	2	0.59
Community Clinic B	1	2	0.61
Community Clinic C	1	1	1.24
Community Clinic D	1	2	0.56

4.4 Requirement of administrative and support staff based on current workload

Usually, clinically relevant human resources (especially physicians and nurses) are emphasized when health related policies and programs are discussed. From the present study it seems that a shortage of support services HR are equally (if not more) responsible for the suboptimum performance of the public health sector. Accordingly, increased concentration is required to rationalize the support services HR in this sector.

Setting activity standards in line with those of the direct health care providers was found to be impractical during the study. First of all, the activities were highly heterogeneous and, in many cases, unpredictable. Secondly, there is no information regarding their services available in MIS.

The required number of administrative and support services by type of facility was determined based on discussions with experienced managers from specific facilities/ programs and total health service needs of the facilities. Using these required numbers of staff, the WISN ratio was calculated once using the current number of staff and the sanctioned number. The analysis revealed that there is a severe shortage of almost all categories of support staff in all types of facilities (Table 14). Only a few categories of administrative staff (i.e. Senior level Administrative Officials, Administrative Assistants, etc.) are found to be balanced in some facilities.

Table 15: Standard Number and WISN Ratios for Support Staff in different Facilities

Sl No	Staff Category	Current Number	Required Number Based on Interview	WISN Ratio	Sanctioned Number	WISN Ratio as per Sanctioned Number
Medical College Hospital						
1	Sr level Administrative Official	3	3	1.00	4	1.33
2	Administrative Official	4	14	0.30	7	0.52
3	Bio-Statistician	0	1	0.00	1	1.00
4	Technical Staff, CME	8	19	0.43	14	0.75
5	Administrative Assistant	34	44	0.77	44	1.00
6	Kitchen Staff	13	50	0.26	28	0.56
7	Laundry Staff	3	16	0.19	5	0.32
8	Attending Staff	124	400	0.31	249	0.62
9	Transport Staff	8	23	0.35	8	0.35
10	Security Staff	4	107	0.04	17	0.16
11	Cleaning Staff	86	300	0.29	138	0.46
12	Mortuary Staff	0	4			
13	Other Staff		6	0.53	4	0.71
District Hospital A						
1	Sr level Administrative Official	1	2	0.50	1	0.50
2	Administrative Official	2	8	0.27	4	0.53
3	Bio-Statistician	1	1	1.00	1	1.00
4	Technical Staff, CME	2	4	0.50	2	0.50
5	Administrative Assistant	25	12	2.08	34	2.83
6	Kitchen Staff	2	10	0.19	6	0.58
7	Laundry Staff	1	9	0.11	1	0.11
8	Attending Staff	0	100	0.00	3	0.03
9	Transport Staff	2	13	0.15	2	0.15
10	Security Staff		21	0.00		0.00
11	Cleaning Staff	6	53	0.11	16	0.30
12	Other Staff	3	2	2.40	3	2.40
District Hospital B						
1	Sr level Administrative Official	2	2	1.00	3	1.50
2	Administrative Official	3	8	0.40	5	0.67
3	Bio-Statistician	0	1	0.00	0	0.00
4	Technical Staff, CME	2	4	0.50	2	0.50
5	Administrative Assistant	11	12	0.92	14	1.17
6	Kitchen Staff	6	10	0.58	6	0.58
7	Laundry Staff	1	9	0.11	1	0.11
8	Attending Staff	32	100	0.32	34	0.34
9	Transport Staff	2	13	0.15	2	0.15

Sl No	Staff Category	Current Number	Required Number Based on Interview	WISN Ratio	Sanctioned Number	WISN Ratio as per Sanctioned Number
10	Security Staff	4	21	0.20	4	0.20
11	Cleaning Staff	20	53	0.38	22	0.41
12	Other Staff	3	2	2.40	3	2.40
Upazila Health Complex D						
1	Sr level Administrative Official	1	2	0.50	1	0.50
2	Administrative Official		5	0.00		0.00
3	Inspector-Health services	18	-		18	
4	Bio-Statistician	0	1	0.00	1	1.00
5	Technical Staff, CME	1	3	0.38	1	0.38
6	Administrative Assistant	6	6	1.04	10	1.73
7	Kitchen Staff	0	4	0.00	2	0.56
8	Laundry Staff		9	0.00		0.00
9	Attending Staff	11	34	0.33	19	0.56
10	Transport Staff	0	7	0.00	1	0.14
11	Security Staff	2	5	0.44	2	0.44
12	Cleaning Staff	5	11	0.47	5	0.47
13	Other Staff		2	0.00		0.00

Discussion

Overall, the workload analysis revealed that public sector health services in Bangladesh are operating with substantial shortages of human resources which is exacerbated by a significant number of vacant positions at all levels of facilities as well as community levels. Workload of health service providers at facility level (eg. physicians, nurse, FWV, etc.) found very high at most facilities and community level (FWA, CHCP etc) in the study area. If sanctioned positions were filled staff gaps relative to workload would have improved. Inequalities exist in workload of among same category of staff working at different levels of facilities as well as among same level of facilities.

The inappropriate support and additional activities (some of which are 'beyond the scope') of any category of staff should be reduced to allow staff to concentrate more on health service-related activities.

Besides clinically relevant human resources support service staff such as cleaning, laundry, attending, kitchen, security etc are also crucial for optimum functioning of the health facilities. Existing number of different types of support services staff at different level facilities are inadequate to manage the workload. There is significant shortage of support services human resources which requires equal attention.

At Present human resources for health particularly at the secondary and tertiary levels, are mainly appointed for curative services. Starting from now on public health approach should be adopted on priority basis to combat the future burden of diseases based on the ongoing epidemiological transition.

4.5 HR Requirement for present ESP Services on the basis of current workload and present population

A. Human Resources requirement to deliver ESP services by type of facility

The ESP represents the Government of Bangladesh's commitment to Universal Health Coverage by ensuring people's right to health in accessing the most essential health services. It is a tool to define in practical terms access to Universal Health Coverage (UHC) by selecting the services that should be made available to the whole population as a guaranteed minimum, thus enhancing equity. According to 4th HPNSP following services to be provided within ESP to the catchment population:

Table 16: ESP Services by facility level

CC	UHFWC	UHC	MCWC	DH
		General Surgery Obstetric Fistula		Trauma Care Ophthalm. Surgery General Surgery Obstetric Fistula
		CEmONC		CEmONC
	BEmONC	Severe cases BEmONC		Severe cases BEmONC
	Pre-term NB Newborn Sepsis	Pre-term NB Newborn Sepsis	CEmONC	Pre-term NB Newborn Sepsis
Normal Newborn N.V. Deliveries	NCD management Normal Newborn N.V. Deliveries	NCD management Normal Newborn N.V. Deliveries	BEmONC Pre-term NB Newborn Sepsis	NCD management Normal Newborn N.V. Deliveries
NCD Screening SBCC EPI/IMCI FP Short Acting Growth Monitoring ANC/PNC Lim. curative care	NCD Screening SBCC EPI/IMCI FP Short Acting GM, SAM mngmt ANC/PNC Lim. curative care	NCD Screening SBCC EPI/IMCI FP Short Acting GM, SAM mngmt ANC/PNC Lim. curative care	Normal Newborn N.V. Deliveries SBCC EPI/IMCI GM, SAM mngmt FP all methods ANC/PNC	NCD Screening SBCC EPI/IMCI FP Short Acting GM, SAM mngmt ANC/PNC Limited curative care

Minimum standard by facility levels

Extra services

The three support (non-clinical) services for ESP are presently as follows:

1. Laboratory
2. Radiology and other image tools
3. Pharmacy

Required number of relevant staff categories involved in provision of the ESP , by Service delivery tier and respective WISN ratio were calculated based on the current workload. In some cases WISN ratio cannot be calculated due to unavailability of service data or vacant positions. In some cases a specific category of staff is required to deliver ESP at that service delivery tier

[7]Bangladesh Essential Health Service Package (ESP), MOHFW

as recommended by Bangladesh ESP document, but currently there is no sectioned position. (eg. FWV post at District Hospital, Nurse post at MCWCs). In those cases minimum required manpower 1 (one) was considered to provide ESP services for the catchment population under that facility. Thus the required number of all staff are first calculated on the basis of

Table 17: Required number of relevant staff categories involved in provision of the ESP based on present workload

Staff Category	Sanctioned Number	Current Number	Required Number	WISN Ratio
District Hospital A				
Physician (Medical Officer)	30	27	75	0.36
Dental Surgeon	2	0	2	
Nurse	184	163	328	0.5
Family Welfare Visitor (FWV)	0	0	1	
Pharmacist	4	3		
Medical Technologist- Laboratory	2	2	3	0.71
Medical Technologist- Radiology	1	1	2	0.64
MCWC-A				
Physician (Medical Officer)	1	1	1	1.7
Family Welfare Visitor (FWV)	1	4	4	0.93
Pharmacist	1	0	1	
Nurse	0	0	1	
Medical Technologist- Laboratory	0	0		
Medical Technologist- Radiology	0	0		
UHC-D				
Physician (Medical Officer)	8	7	14	0.55
Dental Surgeon	1	0	1	
Nurse	25	17	24	0.71
Midwife	0	0	4	
Sub-Assistant Community Medical Officer (SACMO)	2	8		
Pharmacist	2	2		
Family Welfare Visitor (FWV)	0	0	1	
Medical Technologist- Laboratory	3	3		
Medical Technologist- Radiology	1	1		
UH&FWC-C				
Physician			1	
Health Inspector			1	
Family Planning Inspector			1	
Sub Assistant Community Medical Officer (SACMO)	1	1	1	1.25
Family Welfare Visitor (FWV)	1	1	2	0.57
Pharmacist			1	0.00
Midwife			1	0.00
Community Clinic C				
Community Health Care Provider (CHCP)	1	1	1	1.24
Health Assistant (HA)			1	
Family Welfare Assistant (FWA)			1	

workload at the facility. This obviously is an underestimation when the whole population of the catchment area is to be covered. This obviously is an underestimation when the whole population of the catchment area is to be covered. A projection through extrapolation based on certain assumptions for the study areas are given in Annexure-VIII. From these estimates it can be seen that Bangladesh has already come a long way to provide ESP to the whole population and a reasonable increase in total HR (from the already sanctioned posts) may provide standard coverage to the present population.

4.6 Projection of Human Resource requirement for ESP services on the basis of future workload and anticipated population

A fifteen year projection of HRH in the study areas (at years 2021, 2025 and 2030), based on the present (2017) requirement, was made by calculating a staff category-specific Projection Factor (PRF) which is the resultant of Population Factor (PF), Epidemiological Factor (EF), Utilization Factor (UF) and Technological Factor (TF).

PF reflected the estimated population increase at the specific years as per Worldometers Report (www.worldometers.info), which elaborates data from the World Population Prospects (The 2015 Revision) by the United Nations Department of Economic and Social affairs, Population Division. For EF, the death trends due to four of the major NCDs (CVDs, COPD, cancer, and diabetes), as reported by Institute for Health Metrics and Evaluation (www.healthdata.org), were taken into account, and the average time required for managing/counselling for NCDs vs. CDs was assumed to be twice as much due to the nature of the diseases, as well as the newer challenges of the NCD epidemic. Care was taken to adjust duplications due to the presence of comorbidities as recommended by relevant resource persons. The UF was based on an assumption of a 10% increase in service utilization resulting from intensified UHC initiatives as well as from the affordability of the target population. The technological factor, due to increased automation, will have a negative impact on HRH requirement and it was fixed as recommended by experts.

Since UF and TF are not applicable for all categories of staff, three types of PRFs (depending on inclusion of UF and TF) were derived as follows:

PRF-1 = PFxEF
PRF-2 = (PFxEFxUF)
PRF-3 = (PFxEFxUF) + TF

The HRH requirement at specific years was projected by multiplying the present requirement with the PRF as appropriate for that particular year and also for a particular staff category.

Further details with sample calculations are shown in Annex VIII.

The epidemiological transition and technological advancement have also been considered along with this changing population number from which a resultant 'Projection Factor (PF)' has been worked out. The estimated number of staff category-wise HR requirement was then calculated. It can be seen that there is only a modest increase of HR in total, which may result in a big impact on the delivery of ESP services and can be instrumental in achieving UHC by 2030.

Table 18: Projection of HRH Requirement for next 15 years for Revised ESP Delivery

Sl No	Staff Category	Sanctioned #	Current #	Required #, Based on WISN	Requirement 2021				Requirement 2025				Requirement 2030			
					PF-1	PF-2	Projection -1	Projection -2	PF-1	PF-2	Projection -1	Projection -2	PF-1	PF-2	Projection -1	Projection -2
District Hospital A																
1	Nurse	184	163	144	1.13	0.47	163		1.22	0.56	176		1.27	0.61	183	
2	Pharmacist	4	3	0	1.22	0.56	0		1.22	0.56	0		1.27	0.61	0	
3	Laboratory Technologist	2	2	3	1.27	0.61	4	2	1.22	0.56	4	2	1.27	0.61	4	2
4	Technologist Radiology-Imaging	1	1	2	1.27	0.61	3	1	1.22	0.56	2	1	1.27	0.61	3	1
District Hospital B																
1	Dental Surgeon	1	1	0	1.27	0.61	0		1.22	0.56	0		1.27	0.61	0	
2	Nurse	164	136	77	1.27	0.61	98		1.22	0.56	94		1.27	0.61	98	
3	Pharmacist	3	1	0	1.27	0.61	0		1.22	0.56	0		1.27	0.61	0	
4	Laboratory Technologist	4	3	2	1.27	0.61	3	1	1.22	0.56	2	1	1.27	0.61	3	1
5	Technologist Radiology-Imaging	2	1	1	1.27	0.61	1	1	1.22	0.56	1	1	1.27	0.61	1	1
Upazila Health Complex A																
1	Dental Surgeon	1	0	0	1.27	0.61	0		1.22	0.56	0		1.27	0.61	0	
2	Medical Technologist (Laboratory)	3	3	1	1.27	0.61	1	1	1.22	0.56	1	1	1.27	0.61	1	1
3	Medical Technologist (Radiography)	1	1	1	1.27	0.61	1		1.22	0.56	1		1.27	0.61	1	
4	Nurse	26	22	14	1.27	0.61	18		1.22	0.56	17		1.27	0.61	18	
Upazila Health Complex B																
1	Dental Surgeon	1	1	1	1.27	0.61	1		1.22	0.56	1		1.27	0.61	1	

Sl No	Staff Category	Sanctioned #	Current #	Required #, Based on WISN	Requirement 2021				Requirement 2025				Requirement 2030			
					PF-1	PF-2	Projection -1	Projection -2	PF-1	PF-2	Projection -1	Projection -2	PF-1	PF-2	Projection -1	Projection -2
2	Medical Technologist (Laboratory)	2	1	1	1.27	0.61	1	1	1.22	0.56	1	1	1.27	0.61	1	1
3	Medical Technologist (Radiography)	1	1	0	1.27	0.61	0		1.22	0.56	0		1.27	0.61	0	
4	Nurse	9	7	43	1.27	0.61	55		1.22	0.56	53		1.27	0.61	55	
Upazila Health Complex C																
1	Assistant Dental Surgeon	1	1	1	1.27	0.61	1		1.22	0.56	1		1.27	0.61	1	
2	Laboratory Technologist	2	1	4	1.27	0.61	5	2	1.22	0.56	5	2	1.27	0.61	5	2
3	Pharmacist	2	2	0	1.27	0.61	0		1.22	0.56	0		1.27	0.61	0	
4	Technologist Radiology-Imaging	1	1	1	1.27	0.61	1	1	1.22	0.56	1	1	1.27	0.61	1	1
5	Nurse	22	19	26	1.27	0.61	33		1.22	0.56	32		1.27	0.61	33	
Upazila Health Complex D																
1	Dental Surgeon	1	0	0	1.27	0.61	0		1.22	0.56	0		1.27	0.61	0	
2	Laboratory Technologist	3	3	3	1.27	0.61	4	2	1.22	0.56	4	2	1.27	0.61	4	2
3	Pharmacist	2	2	0	1.27	0.61	0		1.22	0.56	0		1.27	0.61	0	
4	Technologist Radiology &Imaging	1	1	0	1.27	0.61	0	0	1.22	0.56	0	0	1.27	0.61	0	0
5	Nurse	26	21	22	1.27	0.61	28		1.22	0.56	27		1.27	0.61	28	
MCWC A																
1	Family Welfare Visitor (FWV)	1	1	4	1.27	0.61	5		1.22	0.56	5		1.27	0.61	5	
MCWC B																

Sl No	Staff Category	Sanctioned #	Current #	Required #, Based on WISN	Requirement 2021				Requirement 2025				Requirement 2030			
					PF-1	PF-2	Projection -1	Projection -2	PF-1	PF-2	Projection -1	Projection -2	PF-1	PF-2	Projection -1	Projection -2
1	Family Welfare Visitor (FWV)	2	2	6	1.27	0.61	8		1.22	0.56	7		1.27	0.61	8	
UH&FWC- A																
1	Sub Assistant Community Medical Officer (SACMO)	1	0	0	1.27	0.61	2.54		1.22	0.56	0		1.27	0.61	0	
2	Family Welfare Visitor (FWV)	1	1	1	1.27	0.61	1		1.22	0.56	1		1.27	0.61	1	
3	Family Welfare Assistant (FWA)	5	4	6	1.27	0.61	8		1.22	0.56	7		1.27	0.61	8	
UH&FWC- B																
1	Sub Assistant Community Medical Officer (SACMO)	1	1	2	1.27	0.61	3		1.22	0.56	2		1.27	0.61	3	
2	Family Welfare Visitor (FWV)	1	1	2	1.27	0.61	3		1.22	0.56	2		1.27	0.61	3	
3	Family Welfare Assistant (FWA)	6	3	5	1.27	0.61	6		1.22	0.56	6		1.27	0.61	6	
UH&FWC-C																
1	Sub Assistant Community Medical Officer (SACMO)	1	1	1	1.27	0.61	1		1.22	0.56	1		1.27	0.61	1	
2	Family Welfare Visitor (FWV)	1	1	2	1.27	0.61	3		1.22	0.56	2		1.27	0.61	3	
3	Family Welfare Assistant (FWA)	7	5	7	1.27	0.61	9		1.22	0.56	9		1.27	0.61	9	
UH&FWC-D																

Sl No	Staff Category	Sanctioned #	Current #	Required #, Based on WISN	Requirement 2021				Requirement 2025				Requirement 2030			
					PF-1	PF-2	Projection -1	Projection -2	PF-1	PF-2	Projection -1	Projection -2	PF-1	PF-2	Projection -1	Projection -2
1	Sub Assistant Community Medical Officer (SACMO)	2	1	1	1.27	0.61	1		1.22	0.56	1		1.27	0.61	1	
2	Family Welfare Visitor (FWV)	1	1	2	1.27	0.61	3		1.22	0.56	2		1.27	0.61	3	
3	Family Welfare Assistant (FWA)	7	7	7	1.27	0.61	9		1.22	0.56	9		1.27	0.61	9	
UH&FWC-E																
1	Sub Assistant Community Medical Officer (SACMO)	1	1	2	1.27	0.61	3		1.22	0.56	2		1.27	0.61	3	
UH&FWC-F																
1	Sub Assistant Community Medical Officer (SACMO)	1	1	2	1.27	0.61	3		1.22	0.56	2		1.27	0.61	3	
UH&FWC-G																
1	Sub Assistant Community Medical Officer (SACMO)	1	0	0	1.27	0.61	0		1.22	0.56	0		1.27	0.61	0	
Community Clinic A																
1	CHCP	1	1	2	1.27	0.61	3		1.22	0.56	2		1.27	0.61	3	
Community Clinic B																
1	CHCP	1	1	2	1.27	0.61	3		1.22	0.56	2		1.27	0.61	3	
Community Clinic C																
1	CHCP	1	1	1	1.27	0.61	1		1.22	0.56	1		1.27	0.61	1	
Community Clinic D																
1	CHCP	1	1	2	1.27	0.61	3		1.22	0.56	2		1.27	0.61	3	

5. Recommendations

A. Short-Term

1. Fill up vacancies all sanctioned posts with priority so that the staff gaps relative to workload are improved. This will relieve workload pressure in understaffed facilities and allow the service providers to provide sufficient time for quality patient care.

2. Create better equity in workload through intra and inter-facility reallocation of staff based on analysis of their workload.

3. Shift some of the 'out of scope' tasks (support and additional activities) of direct health service providers. Specifically, shift activities carried out by nurses to other relevant staff to allow nurses to spend more time on patient care.

4. Rationalization of support service staff in the public sector should also be given urgent attention. On a short-term basis, the vacancies within already sanctioned posts should be filled. In other cases, emergency problems should be addressed and solved by local arrangements.

5. Infrastructure and equipment remaining unused for relatively simple maintenance problems should be given immediate attention as this has a major effect on the underutilization and underestimation of rational HR need of particularly technical HR categories in many cases. This is shown by irrationally higher WISN ratios for these categories.

C. Longer-Term

1 Review and rationalize huge number of existing staff designations in public sector while revising the 'Table of organogram and equipment' of the health facilities, directorates and departments under MOHFW as per BHWS 2015 action plan.

2. The revision of job description as per BHWS 2015 Action Plan should take into account the actual activities of each staff-category. The facility-and program-wise placement of the HRH should be reviewed with more rational and ethically compatible assignment of tasks.

3. For a more rational planning and monitoring of the public sector HRH, the existing MIS should be reviewed and restructured as soon as possible.

4. Prioritization of preventive and promotive health care services need to be incorporated in all policies and plans related to HRH.

5. Support services HR in the public sector should be given equal priority along with the direct health service providers.

6. A proper HR surveillance system should be implemented with properly qualified MIS personnel at all facility and program levels

7. Empirical evidence on the quantitative and qualitative impact of the implementation of HRH policies and plans should be generated through appropriately designed longitudinal studies.

6. Conclusions

Findings of the present study indicate that public sector health services in Bangladesh are operating with substantial shortages of human resources and the problem is particularly acute for preventive and promotive areas as well as for support services.

An additional challenge in this already constrained system is created by the fact that a substantial proportion of available working time (AWT) of the major health care providers are irrationally spent on support or additional activities rather than on activities related to health care delivery. The findings also suggest that the distribution of HR in many cases is not equitable. Application of WISN methodology may be useful in the rational planning of present and future HRH in the country.

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Annexes

Annex I

Technical Advisory Group

Government of the People's Republic of Bangladesh
Ministry of the Health and Family Welfare
Human Resource Management Unit
Bangladesh Secretariat, Dhaka.

Memo no: MOHFW/HRM/Save the child/397/2015/ Date: 16/03/2017

Office Order

I am directed to inform all that to expedite the study on workload and staffing needs assessment for getting necessary recommendations to improve human resource planning, a Technical Advisory Group (TAG) has been formed with representatives from key departments MOHFW, professionals & key stakeholders. The composition of TAG committee is as follows:

1. **Faiz Ahmed**
   Additional Secretary (Admin) & LD, HRM, MOHFW, Dhaka — Chair
2. **Dr. A.E. Md. Mohiuddin Osmani**
   Joint Chief Planning Wing, MOHFW, Dhaka — Member
3. **Dr. Samir Kanti Sarkar**
   Director (Admin), DGSH — Member
4. **Mr. Pranab Kumar Neogi**
   Secretory, Director, Finance & LD, FSD, DGFP — Member
5. **Nahid Sultana Mallik**
   Deputy Chief, HRM, MOHFW, Dhaka — Member
6. **Prof. Dr. Liaquat Ali**
   Vice Chancellor, BUHS, Mirpur, Dhaka — Member
7. **Professor Dr. Md. Humayun Kabir Talukder**
   CME, Mohakhali, Dhaka — Member
8. **Ms. Salma Khatun**
   DPM, DNS, Sher-e-Bangla Nagar, Dhaka — Member
9. **Dr. Syed Abu Zafar Md. Musa**
   Special Advisor, UNFPA, Dhaka — Member
10. **Md. Nuruzzaman**
    NPO-HRH, WHO, Gulshan-1, Dhaka — Member
11. **Dr. Sukumar Sarker**
    Senior Technical Policy Advisor, USAID, Dhaka — Member

12. **Joby George**
COP-Mamoni HSS — Member

13. **Dr. Israt Nayer**
Deputy Director, Health System, Save the Children, Dhaka — Member

14. **Dr. Shams El Arifeen**
Senior Director, MCH Division, icddr'b, Dhaka — Member

15. **Md. Mahfuzur Rahman**
Sr. Assistant Chief, HRM, MOHFW, Dhaka — Member

TOR

Role and Responsibility:

The overall role of the TAG will be advise and guide the Human Resource Management Unit and the study team of the objectives, sub-direct and peripheral levels of health service delivery in the public sector in Bangladesh.

Specific responsibilities of the TAG will be:

- Define the objectives and outline the information requirements for supporting national health workforce planning.
- Review the methodology proposed for workload and staffing needs assessment.
- Suggest appropriate and practical revisions of the proposed methodology in improve the quality of assessment.
- Review the tools and suggest for improvement.
- Advice on deciding study area/districts for study.
- Monitor progress of the study, can undertake field visit and suggest for improvement.
- Review draft report and suggest for improvement.
- Review the findings and make recommendations for the effective use of the findings for the improving health workforce work force planning and management.

Meeting Frequency

TAG will meet bi-monthly or as frequently as needed. TAG meetings will be schedule b the chair and communicated to TAG members with an agenda and supporting documents in advance of meeting. TAG meetings will be minuted, and meetings notes will be shared with members.

(Md. Mahfuzur Rahman)
Sr. Assistant Chief

Annex II

List of Staff Categories

Staff Category	No of Interviewees	Staff Category	No of Interviewees
Administrator for District Management		Nurse, DSH	36
Sr level Administrative Official	22	Nurse, UHC	9
Consultant Medicine	6	Dental Surgeon	2
Consultant Obs & Gynae	2	Medical Technologist, ECG	6
Consultant Surgery	5	Medical Technologist Radiology & Imaging	10
Consultant Casualty		Medical Technologist, Physiotherapy	5
Consultant Ophthalmology	1	Medical Technologist, Lab	13
Consultant Orthopedics and Physical Medicine	4	Medical Technologist, Dental	6
Consultant Paediatrics	3	Medical Technologist, Blood Bank	4
Consultant Psychiatry		Medical Technologist, EPI	4
Consultant ENT	2	Medical Technologist, ECG	
Consultant Skin-VD	2	Pharmacist	19
Consultant Occupational Medicine		Dietician/ Nutritionist	3
Consultant Nephrology	1	CHCP	9
Consultant Physical Medicine		Sub Assistant Community Medical Officer (SACMO)	11
Consultant Gastroenterology	1	Family Welfare Visitor (FWV)	12
Consultant Radiology	1	Family Welfare Assistant (FWA)	21
Consultant Respiratory Medicine		Inspector-FP Services	7
Consultant Anaesthesiology	2	Inspector-Health Services	10
Consultant Cardiology	4	Heath Assistant	12
Consultant, Burn & Plustic Surgery	1	Administrative Official	5
Consultant, Endocrinology	1	Social Welfare Officer	1
Consultant, Neuromedicine	1	Statistician	6
Consultant Transfusion Medicine		Technical Staff, CME	5
Consultant Pathology		Administrative Assistant	41
Consultant Biochemistry		Kitchen Staff	7
Consultant Microbiology		Laundry Staff	5
Physician, MCH	15	Attending Staff	36
Physician, DSH	11	Transport Staff	5
Physician, UHC	20	Security Staff	3
Physician, Union	3	Cleaning Staff	7
Medical Officer (MO)-Clinic	2	Mortuary Staff	2
Medical Officer (MO)-MCH-FP	1	Other Staff	9
Nurse, MCH	43	Total	485

List of Staff Categories and Their Constituent Staff Positions

Sl No	Staff Category	Staff Position
1	Administrator for District Management	CS, DGHS
2		DCS, DGHS
3		MOCS, DGHS
4		MODC, DGHS
5		DDFP, DGFP
6		ADCC, DGFP
7	Sr level Administrative Official	Director
8		Deputy Director
9		Asst. Director
10		Superintendent
11		Deputy Superintendent
12		UH&FPO
13		Upazila Family Planning Officer (UFPO)
16	Physician	RMO
17		MO/ MO (MCH-FP)
18		IMO
19		EMO
20		Registrar
21		Asstt. Registrar
22	Nurse	Matron
23		Jr Matron
24		Nursing Supervisor
25		Sr Staff Nurse (SSN)
26		Assistant Nurse
27		Sister
28	Statistician	Statistician
29		Statistical Assistant
30	Administrative Official	Personnel Officer
31		Administrative Officer
32		Accounts Officer
33		Accountant
34		Sr Store Officer
35		Assistant Upazila Family Welfare Officer (AUFWO)
36		Thana Family Planning Assistant (TFPA)
37	Administrative Assistant	Head Assistant
38		HA/Accountant
39		Head Assistant cum Accountant
40		Accounts Asst
41		Cashier
42		Cash Sarker
43		Office Assistant cum Computer operator

Sl No	Staff Category	Staff Position
44		Store Keeper
45		Telephone Operator
46		Calenderer
47		TB & Leprosy Control Asst
48		Daftry
49		Stenographer -OA
50		Compounder
51		Audio-visual staff
54		Steno-Typist - OA
55		LDA-cum-Typist -OA
56		Statistician Asst- Medical Record Keeper
57		Steward
58		Sterilizer-cum-Mooh.
59		Herbal Assistant
60		Compounder
61		Supervisor, Laundry Plant
62	Inspector, FP Services	Family Planning Inspector (FPI)
63		Assistant Family Planning Inspector (AFPI)
64	Inspector, Health Services	Health Inspector (HI)
65		Assistant HI
66		Nutrition Inspector
67		SI
68	Laboratory Officer	Bio-Chemist (Class-I)
69		Sr.Cl. Pathologist
70		Clinical Pathologist
71	MT, EPI	EPI Technician
72		Medical Technologist, EPI
73	MT, Dental	Dental Technician
74		Medical Technologist, Dental
75	MT, Physiotherapy	Physiotherapy Technician
76		Medical Technologist, Physiotherapy
77	MT, Lab/ Blood Bank	Path/BT Technician
78		Lab Technician
79		Medical Technologist, Lab/ Blood Bank
80	Technician CME	Carpenter
81		Electrician/Mechanic/Liftman
82		Instrument Tech.
83		Jr. Mechanic
84		Instrument C.T
85		Technician Bio & Electro medical
86	Laundry Staff	Linen keeper
89		Tailor
90		Calenderer

Sl No	Staff Category	Staff Position
91	Attending Staff	Sarder
92		OT boy
93		Lab Attd
94		Emergency Attd
95		Nursing Attendant
96		Stretcher Bearer
97		MLSS
98		Peon
99		Aya/Word boy
100		Doptori
102	Transport Staff	Driver
103		Helper
104	Cleaning Staff	Cleaner
105		Sweeper
106	Security Staff	Security Guard
107		Peon cum Guard
108	Other support staff	Moazzin
109		Imam
110		Liftman
111		Dom
112		Gardener

Annex III

Selection of Study Area

The facilities at the district and upazila levels were selected based on high performing facilities and accounted for the following indicators: Average Daily OPD Visits, Total Patient Admission (year), Bed Occupancy Rate, and Vacancy Rate, Number of deliveries, and Number of operations.

A. Medical College Hospital (1):

a. Rajshahi Medical College Hospital
- Among eight Old 8 MCH
- Good performance among the 8 medical colleges other than Dhaka and Chittagong

B. Facility Based Selection:

i. District Hospital (2):
- Kushtia District Hospital
- Brahmanbaria District Hospital

ii. MCWC (2)
- Kushtia Sadar MCWC
- Brahmanbaria Sadar MCWC

iii. Upazila Health Complex (4)
- Daulatpur UHC (Kushtia)
- Kumarkhali UHC (Kushtia)
- Nabinagar UHC (B. Baria)
- Sarail UHC (B. Baria)

C. Union level Facility (UHFWC/USC) : Two from each of the following upazilas has been selected according to the infrastructure, availability of staff and human resource status of the facilities. Workload of all community level workers of selected 8 unions were assessed

a. Daulatpur Upazila (Kushtia district) – 2 Union level facility (1 USC, 1 UHFWC)
- Prayagpur UH&FWC (pop - 36,868)
- Hogalbaria USC (pop -41,440)

b. Kumarkhali Upazila (Kushtia district)- 2 Union level facility (1 USC, 1 UHFWC)
- Kaya UH&FWC (pop – 37,447)
- Jagannathpur USC (pop – 15,550)

c. Nabinagar Upazila (Brahmanbaria district) - 2 Union level facility (1 USC, 1 UHFWC)
- Bitghar UH&FWC (pop – 31,833)
- Ratanpur USC (pop – 29,409)

d. Sarail Upazila (Brahmanbaria district)- 2 Union level facility (1 USC, 1 UHFWC)
- Uttar Panisar UH&FWC (pop – 36,881)

[8]Strengthening of the Union level Health Facilities to Improve Institutional Delivery , DGFP, MOH&FW , August 2016
[9]Best community clinic award 2014, RCHCIB

- Shahjadpur USC (pop – 27,963)

iv. Community Clinic (4): One from each of the following upazilas
- Daulatpur Upazila (Kushtia district) – 1 CC, Kamalpur
- Kumarkhali Upazila (Kushtia district)- 1 CC, Jaynabad
- Nabinagar Sadar Upazila (B. Baria district) – 1 CC, Chouria
- Sarail Upazila (B. Baria district)- 1 CC, Aminpara

Performance of District and Upazila Level Facilities

District/ Upazila	Population[10]	# of Beds in DH[2] / UHC[2]	Performance Indicators[2,3,4]
Kushtia	1933,000	250	Average Daily OPD Visits: 585 Bed Occupancy Rate: 183.31 Total Patient Admission (2014): 53,305 Vacancy rate: 26.09%
Brahmanbaria	2954,000	250	Average Daily OPD Visits: 576 Bed Occupancy Rate: 119.58 Total Patient Admission (year): 86,136 Vacancy rate:
Daulatpur	501,970	50	OPD Visits (2015): 57,035 Bed Occupancy Rate: 89.6 Total Patient Admission (2015): 9,248 Vacancy rate: 23.08%
Kumarkhali	358,745	50	OPD Visits (2015): 44,106 Bed Occupancy Rate: 128.6 Total Patient Admission (2015): 8,753 Vacancy rate: 22.66%
Nabinagar	509,317	31	OPD Visits (2015): 54,155 Bed Occupancy Rate: 84.0 Total Patient Admission (2015): 9,510 Vacancy rate: 8.6%
Sarail	316,379	50	OPD Visits (2015): 57,872 Bed Occupancy Rate: 59.5 Total Patient Admission (2015): 5,793 Vacancy rate: 14.0%

[10]Bangladesh Bureau of Statistics. 2011 Census
[2]Health Bulletin-2015 of MIS, DGHS, MoHFW, GOB
[3]Bangladesh District Level Socio-demographic and Health Care Utilization Indicators, November 2011
[4]Full Vaccination Coverage Report, GAVI 2014

Annex IV

List of Interviewers

Sl No	Name	Responsibility for Facility & Staff Category
1	**Masfida Akhter**	**Facility:** District Hospital (DH); Union Health & Family Welfare Centre (UH&FWC) **Staff Category:** Nurses & all staff of UH&FWC
1.1	Suman Kumar Roy	
1.2	Batul Meurin	
1.3	Eumna Bushra	
1.4	Kalpana Bhandari	
2	**Hasina Akhter Chowdhury**	**Facility:** District Hospital (DH); Upazila Health Complex (UHC) **Staff Category:** Pharmacist, Technician, Technologist, Pathologist, Radiologist, Lab Attendant, Physiotherapist, Nutritionist/Health Educator
2.1	Asif Zubayeer Nibir	
2.2	Muatafiz Rahman	
2.3	Krishna Rani Sarkar	
2.4	Sayeda Jannatul Homaira	
3	**Dr Mithila Faruque**	**Facility:** District Hospital (DH); Upazila Health Complex (UHC) **Staff Category:** Consultants, Physicians & Nurses
3.1	Md Rifat Anam	
3.2	A.T.M Rakibul Hasan	
3.3	Kausara Begum Nilu	
3.4	Yasin Arafat	
4	**Masuma Mannan Lina**	**Facility:** District Hospital (DH); Upazila Health Complex (UHC) **Staff Category:** Consultants, Physicians, Administrator, Administrative staff, Cleaning staff, Security staff, Kitchen staff
4.1	Animesh Biswas	
4.2	Farhana Ahmed	
4.3	Nusrat Binte Reza Purbita	
5	**Jannatul Nayeem**	**Facility:** District Hospital (DH); Maternal and Child Welfare Centre (MCWC); Union Sub Centre (USC) & Community Clinic (CC) **Staff Category:** Physicians, all staff of MCWC, USC & CC
5.1	Subrata Das	
5.2	Shatabdi Sarker	
5.3	Farhana Sobnom Bithi	
5.4	Md Anwar Hossen Khan	
5.5	Juairya Ashger Khan	
5.6	Dilshad Ara	

Annex V

Administrative and Support Staff Requirement Calculation

Requirements for administrative and support services were obtained from the optimum number as mentioned by the experienced managers of specific facilities/programs in relation to total health service needs. A method of calculation has been devised to develop a tool for estimating the Administrative and Support service Human Resources (ASHR) need at different levels of facilities as follows:

Step 1: Calculation of Total Health Service Hours (THSH)

Total Health Service Hours (THSH) in a facility was calculated avoiding duplications (eg. physician and nurses attending the same patients).

Direct Health Service Provider	THSH in Kushtia	THSH in B'Baria	Average of THSH in the DH Facilities
Physician*	71226	47281	59253
Nurse**	111213	51614	81413
Medical Technologist (Lab)	3407	2639	3023
Medical Technologist (R&I)	2316	1360	1838
All other Medical Technologist & Physiotherapist	5032	3149	4090
All Providers	**193193**	**106043**	**149618**

*Physician's Health Service Hours has been considered for OPD and Emergency
**Nurse's Health Service Hours has been considered for IPD

Step 2: Calculation of AWT for ASHR

Total Available Working Time (AWT) of the particular administrative/support staff category was calculated by multiplying AWT of one staff by the optimum number required (as found in the present study) for that particular facility. This was as termed as Support Service Available Working Time (SSAWT).

ASHR (1)	AWT for Individual Staff (2)	Idealized Number for Kushtia DSH (3)	Idealized Number in B'Baria DSH (4)	Average Idealized Number for DSH (5) (3x4)/2	Total ASHR-AWT for DH Facilities (2 x5)
Administrative Assistant	1560	13	11	12	37440
Attending Staff	1560	105	95	100	312000

Step 3: Calculation of Administrative & Support Staff Allowance Factor (ASAF)

An Administrative and Support Staff Allowance Factor (ASAF) for the entire facility was then calculated from the ratio of SSAWT and THSH. This facility level specific ASAF may be used to calculate administrative/support service related HR requirements in other facilities.

ASAF for DH Administrative Assistant (AA)	Total ASHR-AWT for AAs ÷ THSH
ASAF for DH Attending Staff (AS)	Total ASHR-AWT for ASs ÷ THSH

An example of admin./support staff requirement calculation using ASAF for a District Hospital

Calculation of ASAF for District Hospital level administrative & support services HR (ASHR) and estimation of two ASHR categories for a new hypothetical district level facility (DHX) on that basis:

a. DHX has a THSH of 60,000 (calculated as per Step 1)

b. Multiply THSH of DHX with the District Hospital level ASAF for Administrative Assistant (0.125, from Step 3) and for Attending Staff (1.043, from Step 3)

c. Define AWT of each AA and AS of DHX;

d. Requirement of Administrative Assistant in DHX is (60,000 x 0.125) ÷ AWT of each AA (1560) = 4.8 rounded no 5

e. Requirement of Attending Staff (AS) in DHX is (60,000 ÷1.043) ÷ AWT of each AS (1560) = 40.1 rounded no 40Administrative and Support Staff Allowance Factor (ASAF)

Sl. No	Designation	Standard Number of Staff					RMCH				DSH				UPAZILLA LEVEL			
		MCH	DSH	UHC	Union level facility	CC	AWT/ Head	AWT of Standard # of Staff	Total Health Service Hour (THSH)	ASAF	AWT/ Head	AWT of Standard Nr of Staff	THSH	ASAF	AWT/ Head	AWT of Standard # of Staff	THSH	ASAF
1	Sr level Administrative Official	3	2	2			1560	4680	603277	0.008	1560	3120	149618	0.021	1560	3120	71497	0.044
2	Administrative Official	14	8	5	1		1560	21060	603277	0.035	1560	11700	149618	0.078	1560	7800	71497	0.109
3	Inspector-FP services	0	0	0	1		1560	0	603277	0.000	1560	0	149618	0.000	1560	0	71497	0.000
4	Inspector-health services	0	0	0	1		1560	0	603277	0.000	1560	0	149618	0.000	1560	0	71497	0.000
5	Bio-Statistician	1	1	1	0		1560	1560	603277	0.003	1560	1560	149618	0.010	1560	1560	71497	0.022
6	Technical Staff, CME	19	4	3			1560	29250	603277	0.048	1560	6240	149618	0.042	1560	4160	71497	0.058
7	Administrative Assistant	44	12	6	1	0	1560	68640	603277	0.114	1560	18720	149618	0.125	1560	9003	71497	0.126
8	Kitchen Staff	50	10	4	0		1560	78000	360702	0.216	1560	16120	81413	0.198	1560	5531	10222	0.541
9	Laundry Staff	16	9	9	0		1560	24180	360702	0.067	1560	14560	81413	0.179	1560	13650	10222	1.335
10	Attending Staff	400	100	34	4	1	1560	624000	603277	1.034	1560	156000	149618	1.043	1560	52643	71497	0.736
11	Transport Staff	23	13	7	0		1560	35880	603277	0.059	1560	20280	149618	0.136	1560	10920	71497	0.153
12	Security Staff	107	21	5	2	1	1560	166400	603277	0.276	1560	31980	149618	0.214	1560	7020	71497	0.098
13	Cleaning Staff	300	53	11	2	1	1560	468000	603277	0.776	1560	83200	149618	0.556	1560	16770	71497	0.235
14	Mortuary Staff	4	0	0	0		1560	6240	603277	0.010	1560	0	149618	0.000	1560	0	71497	0.000
15	Other Staff	6	1	2	0		1560	8840	603277	0.015	1560	1950	149618	0.013	1560	2808	71497	0.039

Annex VI

Workload Components and Activity Standards by Category of Staff

1. CONSULTANT, SURGERY

Sl No	Workload Component	Average Standard	
		Time	Unit
A.	***Health Service Activities***		
1.	**Out-patient**		
	Regular Consultancy	9	min/pt
	Minor procedures		
	Dressing	10	min/pt
	Small tumor operation	15	min/pt
	Foreign body removal	20	min/pt
	Other activities-		
	Stitching	7	min/pt
	Drainage	10	min/pt
2.	**Inpatient Service**		
	Clinical round for Patient Care	5	min/pt
	Minor procedures (eg. Dressing, inserting Naso- gastric tube/ Ryle's tube / Catheterization	10	min/pt
3.	**OT**		
	Operation-major	60	min/pt
	Operation-intermediate	45	min/pt
	Operation-minor	30	min/pt
4.	**Emergency**		
	Emergency case management	60	min/pt
B.	***Support Activities***		
	Attending Clinical meeting (CME)	45	min/mon
	Attending training/ conference	8	days/yr
	Attending Meeting	75	min/mon
	Indent Signature	40	min/day

2. CONSULTANT, ORTHOPAEDIC

Sl No	Workload Component	Average Standard	
		Time	Unit
A.	***Health Service Activities***		
1.	**Out-Patient**		
	Regular Consultancy	9	min/pt
	Dressing	10	min/pt
2.	**Inpatient Service**		
	Clinical round for Patient Care	5	min/pt
	Dressing	10	min/pt
3.	**OT**		
	Operation-major (eg. Spine Surgery, Joint Replacement/ others etc.)	90	min/pt
	Operation-intermediate	45	min/pt
	Operation-minor	30	min/pt
B.	***Support Activities***		
	Dressing	3	hr/ week
	Attending Clinical meeting (CME)	12	hr/ yr
	Attending training/ conference	7	days/year
	Attending Meeting	8	hr/ mon

3. CONSULTANT, OBS & GYNAE

Sl No	Workload Component	Average Standard	
		Time	Unit
A.	***Health Service Activities***		
1.	**Out-Patient**		
	Regular Consultancy	9	min/pt
	Outdoor minor procedure		
	USG	15	min/pt
	Pap smear	10	min/pt
	Colposcopy	15	min/pt
	Sample collection for biopsy	10	min/pt
2.	**Inpatient Service**		
	Clinical round for patient Care	5	min/pt
	Dressing	10	min/pt
3.	**OT**		
	Operation-major (eg. Hysterectomy, fistula, Laparoscopy etc.)	60	min/pt
	Operation-intermediate (eg. C-section)	45	min/pt
	Operation-minor (MVA etc.)	20	min/pt
B.	***Support Activities***		
	Attending clinical meeting (CME)	8	min/week
	Attending Meeting	45	min/week
	Attending training/ Conference	7	days/year
	Central Seminar	90	min/week
C.	***Additional Activities***		
	Teaching	54	hours/yr
	Exam Conduction	132	hours/yr

4. CONSULTANT, OPHTHALMOLOGY

Sl No	Workload Component	Average Standard	
		Time	Unit
A.	***Health Service Activities***		
1.	**Out-Patient**		
	Regular Consultancy	9	min/pt
	Refractometer	5	min/pt
	Dressing	10	min/pt
2.	**Inpatient Service**		
	Clinical round for Patient Care	10	min/pt
3.	**OT**		
	Operation-major	60	min/pt
	Operation-intermediate	45	min/pt
	Operation-minor	30	min/pt
4.	**Emergency**	60	min/pt
B.	***Support Activities***		
	Attending Clinical meeting (CME)	90	min/month
	Attending training/ Conference	7	days/year
	Attending Meeting	6	hr/month
	Management of referred cases	6	hr/month
	Attend days observation events	10	days/year
C.	***Additional Activities***		
	Roaster preparation or departmental activities	6	hours/yr
	Medical Board	10	hours/yr

5. CONSULTANT, MEDICINE

Sl No	Workload Component	Average Standard	
		Time	Unit
A.	***Health Service Activities***		
1.	**Out-Patient**		
	Regular Consultancy	9	min/pt
2.	**Inpatient Service**		
	Clinical round for patient care	5	min/ptn
	Bedside Minor procedures		
	Lumber puncture	20	min/ptn
	Fluid drainage	40	min/ptn
	NG tube insertion	15	min/ptn
3	**Emergency**		
	Emergency management	30	min/ptn
B.	***Support Activities***		
	Supervision of Clinical activities	15	min/day
	Attending Clinical meeting (CME)	1	hr/week
	Attending Training/ Conference	7	days/yr
	Attending Meeting	19	hr/yr
	Attend days observation events	7	days/yr
	Roaster preparation / departmental activities	1	hr/yr
C.	***Additional Activities***		
	Conducting training program	45	hr/yr
	Medical Board	17	hr/yr
	Health Checkup for ACR	25	hr/yr

6. CONSULTANT, CARDIOLOGY

Sl No	Workload Component	Average Standard	
		Time	Unit
A.	***Health Service Activities***		
1.	**Out-Patient**		
	Regular Consultancy	9	min/pt
	ECG Reporting	0.2	min/pt
2.	**Inpatient Service**		
	Clinical round for patient care	5	min/pt
3	**Surgical procedure**		
	Coronary Angiogram	18	min/pt
	Percutaneous Transluminal Coronary Angioplasty	60	min/pt
	Percutaneous Transluminal Mitral Comissurectomy	60	min/pt
	Temporary Pace Maker	15	min/pt
	Permanent Pace Maker	60	min/pt
B.	***Support Activities***		
	Attending Clinical meeting (CME)	67.5	min/month
	Attending Training/ Conference	5	days/yr
	Attending Meeting	85	min/month
C.	***Additional Activities***		
	Roaster preparation or departmental activities	3.5	hr/yr
	Involvement in policy and development related activities	12	hr/yr

7. CONSULTANT, RADIOLOGY & IMAGING

Sl No	Workload Component	Average Standard	
		Time	Unit
A.	***Health Service Activities***		
1.	**Out-Patient**		
	Plain X-ray	4	min/pt
	Contrast X-ray	8	min/pt
	USG	15	min/pt
	CT Scan	10	min/pt
	MRI	15	min/pt
B.	***Support Activities***		
	Attending Clinical meeting (CME)	8	hr/month
	Attending training/ conference	7	days/year
	Attending Meeting	12	hr/year

8. CONSULTANT, ENT

Sl No	Workload Component	Average Standard	
		Time	Unit
A.	***Health Service Activities***		
1.	**Out-Patient**		
	Regular Consultancy	9	min/pt
	Hearing screening test	13	min/pt
	Newborn Hearing Screening	20	min/pt
2.	**Inpatient Service**		
	Clinical round for patient care	5	min/pt
3.	**OT**		
	Operation-major	90	min/pt
	Operation-intermediate	45	min/pt
	Operation-minor	30	min/pt
4.	**Emergency**		
	Emergency management	60	min/pt
B.	***Support Activities***		
	Attending Clinical meeting (CME)	4	hr/mom
	Attending training/ Conference	7	days/year
	Attending Meeting	60	min/mon
C.	***Additional Activities***		
	Medical Board	60	min/yr

9. CONSULTANT, DENTAL

Sl No	Workload Component	Average Standard	
		Time	Unit
A.	***Health Service Activities***		
1.	**Out-Patient**		
	Regular Consultancy	8	min/pt
	Procedures		
	Dressing	30	min/pt
	Episectomy	75	min/pt
	Impacted tooth extraction	60	min/pt
	Cyst operation, minor	53	min/pt
	Epeulis surgery	30	min/pt
	Fracture of the jaw	90	min/pt
	Apical abscess	90	min/pt
	Orthodontic treatment	60	min/pt
	Crown of tooth	120	min/pt
	Bridge	240	min/pt
	Partial denture (lab activity)	240	min/pt
	Complete denture (lab activity)	1200	min/pt
	Filling	18	min/pt
	Root Cannel	25	min/seating
	Scaling one Jaw	28	min/pt
	Extraction	23	min/case
	Apses, Cellulites	45	min/pt
2.	**Inpatient Service**		
	Clinical round for Patient Care	25	min/pt
	Minor procedures		
	Dressing (if it is health service activities)	10	min/pt
	Wearing & Fixation	105	min/pt
	Fixation Removal	30	min/pt
3.	**OT**		
	Fracture reduction, close method	120	min/pt
	Fracture reduction, open method	180	min/pt
	Benign tumor operation	120	min/pt
	Cyst operation, major	120	min/pt
	Any other operation	60	min/pt
B.	***Support Activities***		
	Attending Clinical meeting (CME)	4	hr/month
	Attending training/ Conference	6	day/yr
	Attending Meeting	2	days/month

10. CONSULTANT, BURN & PLUSTIC SURGERY

Sl No	Workload Component	Average Standard	
		Time	Unit
A.	***Health Service Activities***		
1.	**Out-Patient**		
	Regular Consultancy	25	min/pt
	Minor procedures		
	Training on posture and feeding (for all patients)	5	min/pt
2.	**Inpatient Service**		
	Clinical round for Patient Care	20	min/pt
3.	**OT**		
	Operation-major	90	min/pt
	Operation-intermediate	45	min/pt
	Operation-minor	30	min/pt
4.	**Emergency**		
	Emergency case management within 24hrs	60	min/pt
B.	***Support Activities***		
	Dressing	45	min/day
	Injection	30	min/week
	Training on exercise	160	min/week
	Attending Clinical meeting (CME)	60	hr/yr
	Attending training/ conference	28	days/yr
	Attending Meeting	1	hr/month
	Attend days observation events	12	days/yr
C.	***Additional Activities***		
	Involvement in policy and development related activities	12	hr/yr
	Conducting training program	4	hr/yr
	Medical Board	3	hr/yr

11. CONSULTANT, NEUROMEDICINE

Sl No	Workload Component	Average Standard	
		Time	Unit
A.	***Health Service Activities***		
1.	**Out-Patient**		
	Regular Consultancy	9	min/ptn
2.	**Inpatient Service**		
	Clinical round for patient care	5	min/ptn
	Bedside Minor procedures		
	Lumber puncture	10	min/ptn
	Fluid drainage	30	min/pt
	Referral patient attend	15	min/ptn
B.	***Support Activities***		
	Attending Clinical meeting (CME)	90	min/week
	Attending Training/ Conference	5	days/yr
	Attending Meeting	7	hr/year
C.	***Additional Activities***		
	Administrative Work	468	hours/year
	Question setting for examinations	6	hours/year
	Exam Conduction	24	hours/year

12. CONSULTANT, ANAESTHESIA

Sl No	Workload Component	Average Standard	
		Time	Unit
A.	***Health Service Activities***		
1.	**Inpatient Service**		
	Pre-Operative Check-up	7	min/pt
2.	**OT Services**		
	Operation-major	30	min/pt
	Operation-intermediate	25	min/pt
	Operation-minor	15	min/pt
B.	***Support Activities***		
	Attending Clinical meeting (CME)	60	min/mon
	Attending Training/ Conference	7	day/yr
	Emergency duty	1	day/ week
C.	***Additional Activities***		
	Roaster preparation or departmental activities	96	hr/yr

13. CONSULTANT, DERMATOLOGY

Sl No	Workload Component	Average Standard	
		Time	Unit
A.	***Health Service Activities***		
1.	**Out-Patient**		
	Regular Consultancy	9	min/pt
	Steroid Injection	3	min/pt
2.	**Inpatient Service**		
	Clinical round for patient care	5	min/pt
3.	**Emergency**		
	Emergency management (on call)	7.5	min/pt
B.	***Support Activities***		
	Attending Clinical meeting (CME)	8	hr/month
	Attending training/ Conference	7	day/yr
	Attending Meeting	18	hr/yr
	Medical Team for VIP	2	day/yr

14. CONSULTANT, PEDIATRICS

Sl No	Workload Component	Average Standard	
		Time	Unit
A.	***Health Service Activities***		
1.	**Out-Patient**		
	Regular Consultancy	9	min/pt
2.	**Inpatient Service**		
	Clinical round for patient care	5	min/pt
	Lumber puncture	20	min/pt
	Plural fluid aspiration	25	min/pt
	Discharge certificate	7	min/pt
3.	**OT**		
	Baby care after delivery on call	40	min/pt
	Major OT	60	min/pt
	Minor OT	20	min/pt
4.	**Emergency**		
	Emergency management	30	min/pt
B.	***Support Activities***		
	Attending Clinical meeting (CME)	30	min/week
	Attending Training/ Conference	6	days/yr
	Attending Meeting	3	hr/mon

15. CONSULTANT, GASTROENTEROLOGY

Sl No	Workload Component	Average Standard	
		Time	Unit
A.	***Health Service Activities***		
1.	**Out-Patient**		
	Regular Consultancy	10	min/pt
2.	**Inpatient Service**		
	Clinical round for patient care	7	min/pt
3.	**Other activities**		
	Endoscopy	15	min/ptn
	Colonoscopy	40	min/ptn
	Bronchoscopy	15	min/ptn
B.	***Support Activities***		
	Attending Clinical meeting (CME)	90	min/week
	Attending Training/ Conference	5	days/yr
	Attending Meeting	2	hr/yr
	ACR	1000	min/yr
C.	***Additional Activities***		
	Teaching	260	hr/yr

16. CONSULTANT, ENDOCRINOLOGY

Sl No	Workload Component	Average Standard	
		Time	Unit
A.	***Health Service Activities***		
1.	**Out-Patient**		
	Regular Consultancy	5	min/pt
2.	**Inpatient Service**		
	Clinical round for patient care	7	min/pt
	Referral patient attend	7	min/pt
B.	***Support Activities***		
	Attending Clinical meeting (CME)	90	min/week
	Evening Round	60	min/week
	Attending Training/ Conference	5	days/yr
	Attending Meeting	120	min/mon
C.	***Additional Activities***		
	Roaster preparation or departmental activities	48	hr/yr
	Teaching	52	hr/yr

17. CONSULTANT, NEPHROLOGY

Sl No	Workload Component	Average Standard	
		Time	Unit
A.	***Health Service Activities***		
1.	**Out-Patient**		
	Regular Consultancy	15	min/pt
2.	**Inpatient Service**		
	Clinical round for patient care	10	min/pt
	Bedside Minor procedures		
	Lumber puncture	10	min/pt
	Fluid drainage	30	min/pt
	Renal Biopsy	15	min/pt
	Peritoneal Dialysis	20	min/session
	Central Venus Catheter	20	min/pt
3.	**Emergency**		
	Emergency management	30	min/pt
B.	***Support Activities***		
	Attending Clinical meeting (CME)	12	hr/yr
	Attending Training/ Conference	5	days/yr
	Attending Meeting	7	hr/month
	Referral Visit	2	hr/week
	Attend days observation events	5	days/yr
C.	***Additional Activities***		
	Health Check for ACR	20	hr/yr
	Involvement in policy and development related activities	24	hr/yr
	Medical Board	3	hr/yr

18. PHYSICIAN (Medical College Hospital)

Sl No	Workload Component	Average Standard	
		Time	Unit
A.	***Health Service Activities***		
1.	**Out-Patient**		
	Consultancy (General)	8	min/pt
	Consultancy (ANC/PNC)	11	min/pt
	IMCI	5	min/pt
2.	**Inpatient Service**		
	Round with seniors	3	min/pt
	Bedside Patient Care	8	min/pt
	Lumber puncture	20	min/ptn
	Fluid drainage	15	min/ptn
	NG tube insertion	10	min/ptn
	NVD	30	min/pt
	Minor procedures		
	Dressing	10	min/pt
	Clinical service like NG tube/ Ryle's tube insertion / Catheterization	18	min/pt
	Discharge	5	min/pt
3.	**OT**		
	Operation-major	60	min/pt
	Operation-intermediate	45	min/pt
	Operation-minor	20	min/pt
4.	**Emergency**		
	Emergency case management	14	min/pt
B.	***Support Activities***		
	Attending staff meeting	19	hr/yr
	Witness in court	6	days/yr
	Participate in training program	7	days/yr
	Exam duty	2	days/yr
C.	***Additional Activities***		
	Seminar/ Workshop/Conference	8	hr/year
	Duty Roaster preparation	1	hr/month
	Clinical Meeting	6	hr/month
	Journal Club	2	hr/month
	Board Meeting for death declaration	12	hr/week
	Attestation	15	min/day

19. PHYSICIAN (District Sadar Hospital)

Sl No	Workload Component	Average Standard	
		Time	Unit
A.	***Health Service Activities***		
1.	**Out-Patient Services**		
	General Consultancy	8	min/pt
	Consultancy (ANC/PNC)	11	min/pt
	NVD	30	min/pt
	IMCI	5	min/pt
2.	**In-Patient Services**		
	Clinical round with seniors	3	min/pt
	Clinical round for patient care	8	min/pt
	VIA	5	min/pt
	Minor procedures e.g. Clinical service like NG tube/ Ryle's tube insertion / Catheterization	18	min/pt
	Discharge	5	min/pt
	Death certificate	5	min/pt
3	**OT Services**		
	Preparation for OT	15	min/pt
	Dressing	6	hrs/week
	OT assistance to consultant		
	Major Surgery (eg Colorectal, Breast,Gangrene surgery etc)	60	min/pt
	Intermediate Surgery (eg. Laparoscopic Surgery, Hernia operation etc)	45	Min/pt
	Minor Surgery (eg. Foot care Surgery, Appendectomy etc.)	20	Min/pt
4	**Emergency**		
	Emergency case management	14	min/pt
B.	***Support Services***		
	Attending staff meeting	16	hr/yr
	Supervising MATS Intern	30	min/day
	Injury certificate issue	1	min/cert
	Attend days observation events	6	days/yr
	Witness in court	12	days/yr
	Participate in training program	7	days/yr
	Clinical Meeting	1	hr/week
C.	***Additional Activities***		
	Conducting training program	2	days/yr
	Attending monthly meeting in Civil Surgeons Office and other meeting as directed	26	hours/yr
	Seminar/ Workshop/Conference	6	days/yr
	Duty Roaster preparation	60	min/month
	Register Maintain	20	min/day
	Postmortem and medico legal service	3	hr/week
	Monitor proper waste management activity	60	min/week

20. PHYSICIAN (Maternal & Child Welfare Centre)

Sl No	Workload Component	Average Standard	
		Time	Unit
A.	***Health Service Activities***		
1.	**Out-Patient Services**		
	Consultancy- General	10	min/pt
	Consultancy-ANC	10	min/pt
	Consultancy-PNC	10	min/pt
	RTI/STI	10	min/pt
	Child Care (Under 5)	5	min/pt
	Ligation	15	min/pt
	Implant	5	min/pt
	Normal Delivery	55	min/pt
	C Section	45	min/pt
	Round	15	min/pt
	Patient Referral	15	min/pt
B.	***Support Activities***		
	Attending staff meeting	8	hr/month
	Monitor proper waste management activity	30	min/week
	Camp in UHC	7	days/yr
	Supervising ICT, NCD, IMCI activity	6	days/mon
C.	***Additional Activities***		
	Conducting training program	2	days/yr
	Participate in training program	15	days/yr

21. PHYSICIAN (Upazila Health Complex)

Sl No	Workload Component	Average Standard	
		Time	Unit
A.	***Health Service Activities***		
1.	**Out-Patient**		
	Consultancy (General)	9	min/pt
	Consultancy (ANC/PNC)	11	min/pt
	IMCI	5	min/pt
2.	**Inpatient service**		
	Clinical round with seniors	3	min/pt
	Individual round for Patient Care	8	min/pt
	Minor procedures		
	Clinical service like NG tube/ Ryle's tube insertion / Catheterization	18	min/pt
	Discharge	5	min/pt
3.	**OT**		
	Dressing	6	hrs/week
	Major Surgery	60	min/pt
	Intermediate Surgery	45	min/pt
	Minor Surgery	20	min/pt
4.	**Emergency**		
	Emergency case management	14	min/pt
B.	***Support Activities***		
	Attending staff meeting	46	hr/yr
	Supervising ICT, NCD, IMCI activity	19	hr/yr
	Injury certificate issue	9	min/cert
	Court attend	6	days/year
	Attend days observation events	6	days/yr
	Monthly Reporting	92	min/month
	Participate in training program	7	days/yr
	Exam duty	4	days/yr
C.	***Additional Activities***		
	Monitor and supervise the field level activities (EPI, Surveillance, Vit-A and Deworming Campaign and others program)	4	days/yr
	Conducting training program	8	days/yr
	Attending monthly meeting in Civil Surgeons Office and other meeting as directed	9	days/yr
	Other Meetings (UNO, MP)	96	hr/yr
	Coordination meeting with field level workers	3	hr/month
	Duty Rostering	60	min/month
	Disaster management	4	days/yr
	Visit to sub centre	5	days/mon
	Monitor proper waste management activity	53	min/week
	Visit to Community Clinic	5	days/mon
	Supervision of IT activities	6	hr/month
	Attestation	15	min/day

22. PHYSICIAN (Union Sub Centre)

Sl No	Workload Component	Average Standard	
		Time	Unit
A.	***Health Service Activities***		
	Consultancy General pt	9	min/pt
	IMCI	15	min/pt
	Antenatal Care	10	min/pt
	Postnatal Care	10	min/pt
	Referral of patients	9	min/pt
B.	***Support Activities***		
	Attending staff meeting	6	hr/month
	Supervising ICT, NCD, IMCI activity	12	hr/month
	Monitor proper waste management activity	11	hr/month
	Disaster management activities	2	days/year
	Outbreak activities	12	days/year
	Register Maintain (Medicine)	1	hr/day
	Monthly reporting	3	hr/month
C.	***Additional Activities***		
	Observe & participate in various health programs (EPI, Surveillance, Vit-A and Deworming Campaign and others program)	7	days/yr
	Monitor and supervision of health programs	2	days/yr
	Conducting training program	3	days/yr
	Participate in training program	7	days/yr
	All types of communications with the superior	36	min/week
	Indent Writing	30	min/month
	Communications with others	43	min/day

23. NURSE (Medical College Hospital)

Sl No	Workload Component	Average Standard	
		Time	Unit
A.	***Health Service Activities***		
1.	**Inpatient Services**		
	Patient Receiving	14	min/pt
	Bedside Care of Patient	18	min/pt
	Round with doctors	6	min/pt
	Patient discharge	10	min/pt
	Normal delivery	3	hr/pt
	VIA	18	min/pt
	Patient death management	30	min/pt
	Referral information	18	min/pt
2	OT Services		
	Patient prepare for OT	30	min/pt
	Operation-major	60	min/pt
	Operation-intermediate	45	min/pt
	Operation-minor	20	min/pt
B.	***Support Activities***		
	Handover shifts (take & give)	33	min/day
	Patient bed making	45	min/day
	Patient file checking	1	hr/day
	Staff meetings	2	hr/mon
	Cleaning & sterilizing instruments-in ward	42	min/day
	Daily check out (injection, ambu bag, 02 meter check, suction machine etc)	16	min/day
	Sample management	15	min/day
	Report management	15	min/day
	Instrument sterilization	40	min/day
	Patient counseling	35	min/day
	Attending to Training	10	days/yr
C.	***Additional Activities***		
	In-charge meetings	3	hr/mon
	Duty Roaster preparation	1	hr/day
	Supervision of diets	30	min/day
	Supervision of cleaning	1	hr/day
	Linen/laundry/Cleaning Management	28	min/day
	Store management	2	hr/day
	Monthly reporting	2	hr/mon
	Stock register maintenance	3	hr/week
	Requisition of supplies and drugs from Stores	2	hr/week
	Administration and supervision of subordinates/ students on the ward	1	hr/day

24. NURSE (District Sadar Hospital)

Sl No	Workload Component	Average Standard	
		Time	Unit
A.	***Health Service Activities***		
1.	**Inpatient Services**		
	Patient Receiving	16	min/pt
	Bedside Care of Patient	17	min/pt
	Round with doctors	3	min/pt
	Patient and relative counselling	16	min/pt
	Patient discharge	10	min/pt
	Normal delivery	180	min/pt
	VIA	18	min/pt
	Patient death management	30	min/pt
	Referral information	18	min/pt
	OT Services		
	Patient prepare for OT	30	min/pt
	Operation-major	60	min/pt
	Operation-intermediate	45	min/pt
	Operation-minor	20	min/pt
B.	***Support Services***		
	Handover shifts (take & give)	33	min/day
	Patient bed making	44	min/day
	Patient file checking	1	hr/day
	Staff meetings	2	hr/mon
	Cleaning & sterilising instruments	38	min/day
	Daily check out (injection, ambubag, O2 meter check, suction machine etc)	16	min/day
	Sample management	32	min/day
	Report management	35	min/day
	National Day Celebration	6	days/yr
	Attending to Training	7	days/yr
C.	***Additional Activities***		
	In-charge meetings	3	hr/mon
	Duty-roastering	1	hr/day
	Supervision of diets	30	min/day
	Supervision of cleaning	1	hr/day
	Linen/laundry/Ceaning Management	38	min/day
	Store management	2	hr/day
	Monthly reporting	2	hr/mon
	Stock register maintainance	3	hr/week
	Requisition of supplies and drugs from Stores	2	hr/week
	Administration and supervision of subordinates/ students on the ward	1	hr/day

25. NURSE (Upazila Health Complex)

Sl No	Workload Component	Average Standard	
		Time	Unit
A.	***Health Service Activities***		
1.	**Inpatient Services**		
	Patient Receiving	16	min/pt
	Bedside Care of Patient	17	min/pt
	Round with doctors	3	min/pt
	Patient discharge	10	min/pt
	Normal delivery	180	min/pt
	VIA	18	min/pt
	Patient death management	30	min/pt
	Referral information	18	min/pt
	Patient and relative counseling	16	min/day
2	**OT Services**		
	Patient prepare for OT	30	min/pt
	Operation-major	1	hr/pt
	Cleaning & sterilizing instruments-after OT	30	min/day
B.	***Support Activities***		
	Handover shifts (take & give)	33	min/day
	Patient bed making	44	min/day
	Patient file checking	1	hr/day
	Staff meetings	2	hr/mon
	Cleaning & sterilizing instruments-in ward	38	min/day
	Daily check out (injection, ambu bag, O2 meter check, suction machine etc)	16	min/day
	Sample management	15	min/day
	Report management	15	min/day
	Instrument sterilization	40	min/day
	Patient counseling	13	min/day
	Attending to Training	10	days/yr
	National day celebration	6	days/yr
C.	***Additional Activities***		
	In-charge meetings	3	hr/mon
	Duty Roaster preparation	1	hr/day
	Supervision of diets	30	min/day
	Supervision of cleaning	1	hr/day
	Linen/laundry/Cleaning Management	28	min/day
	Store management	2	hr/day
	Monthly reporting	2	hr/mon
	Stock register maintenance	3	hr/week
	Requisition of supplies and drugs from Stores	2	hr/week
	Administration and supervision of subordinates/ students on the ward	1	hr/day

26. MEDICAL TECHNOLOGIST, LAB

Sl No	Workload Component	Average Standard	
		Time	Unit
A.	***Health Service Activities***		
1	**Biochemical Test**		
	Blood glucose(collection, preparation, test time)	15	min/test
	Creatinine (collection, preparation, test time)	15	min/test
	AST/SGOT (collection, preparation, test time)	15	min/test
	ALT/SGPT	15	min/test
	Serum bilirubin (collection, preparation, test time)	15	min/test
	Albumin	15	min/test
	Blood urea	15	min/test
	Lipid profile	15	min/test
	Total protein	15	min/test
	Uric Acid	15	min/test
	ALP(alkaline phosphate)	15	min/test
	Electrolyte	15	min/test
2	**Urine R/E Test**	8	min/test
3	**Stool R/E Test**	8	min/test
4	**Hematological Test**		
	CBC (Manual)	10	min/test
	BT,CT	10	min/test
	ESR	10	min/test
	Hb	10	min/test
	Platelet count	10	min/test
	Blood Grouping	12	min/test
	Screening test	10	min/test
5	**Immunological Test**		
	ASO Titer	10	min/test
	RA	10	min/test
	CRP	10	min/test
	VDRL	10	min/test
	WIDAL	10	min/test
	HbsAg	10	min/test
	Dengue	10	min/test
	MP	10	min/test
	Widal Test	10	min/test
	Urine PT(Pregnancy test)	10	min/test

Sl No	Workload Component	Average Standard	
		Time	Unit
6	**Microbiological Test**		
	Blood C/S	15	min/test
	Urine C/S	15	min/test
	Sputum AFB	15	min/test
	Other C/S:	15	min/test
	Weil-felix	5	min/test
7	**Histopathological Test**	30	min/test
B.	***Support Activities***		
	Requisition for chemicals, reagents & supplies	45	min/mon
	Stock register maintaining	8	day/year
	Organize and store all chemicals substances, fluids and compressed gases according to safety instructions	75	min/mon
	Reporting monthly/weekly	30	min/week
	Report checking & signing	30	min/day
	Attending training on special test or equipment	6	days/yr
	Attending seminar on special test or equipment	2	days/yr
	Attending staff meeting	1	hr/week
C.	***Additional Activities***		
	Attending meeting	9	hr/yr
	Communication with other dept. (Maintenance, store etc)	11	min/day

27. MEDICAL TECHNOLOGIST, BLOOD BANK

Sl No	Workload Component	Average Standard	
		Time	Unit
A.	***Health Service Activities***		
	Blood grouping & cross matching	12	min/pt
	Blood collection & preservation for transfusions	30	min/pt
	Screening	10	min/pt
B.	***Support Activities***		
	Requisition for chemicals, reagents & supplies	5	hr/week
	Stock register maintain for blood bag, syringe, tubes, glass, cover slip slides etc	22	hr/week
	Maintain all equipment & instruments, chemicals substances, fluids and compressed gases according to safety instructions	3	hr/week
	Report preparation	9	hr/week
	Record keeping	1	hr/day
	Monthly reporting	1	hr/month
	Attending staff meeting	3	hr/month

28. MEDICAL TECHNOLOGIST, RADIOLOGY & IMAGING

Sl No	Workload Component	Average Standard	
		Time	Unit
A.	***Health Service Activities***		
	Plain X-ray	11	min/pt
	USG	10	min/pt
	CT scan	15	min/pt
	MRI	15	min/pt
	X-ray/USG for age determination	15	min/pt
B.	***Support Activities***		
	Meeting with RMO/ In-Charge	2	hr/month
	Attending training	7	days/year

29. MEDICAL TECHNOLOGIST, EPI

Sl No	Workload Component	Average Standard	
		Time	Unit
A.	***Health Service Activities***		
	Patient counseling	22	min/pt
	Providing Medicine & Vaccine according to the prescription (indoor & outdoor)	8	min/pt
B.	***Support Activities***		
	Supervise field level activities	7	hr/week
	Maintenance of equipment & instruments	2	hr/day
	Requisition for medicine & vaccine	3	hr/month
	Receiving the medicine & vaccine from suppliers	8	hr/month
	Storage & preservation of medicine & vaccine	2	hr/month
	Maintaining the stock of medicine & vaccine	3	hr/day
	Record Keeping and reporting	3	hr/month
	Meeting with in-charge , HI & others	5	hr/week
	monthly reporting	3	hr/month
	Attending training	7	days/yr
C.	***Additional Activities***		
	Attending seminar, health camp in field	87	min/day

30. MEDICAL TECHNOLOGIST, DENTAL

Sl No	Workload Component	Average Standard	
		Time	Unit
A.	***Health Service Activities***		
	Tooth extraction	13	min/pt
	Record keeping	17	min/pt
B.	***Support Activities***		
	Sterilize the equipment & instruments	90	min/month
	Requisition to the store for apparatus, medicine & others	8	days/year
	Stock register maintain of apparatus, medicine, instruments & others	105	min/month
	Maintenance of the apparatus and medicine	30	min/day
	Attending staff meeting	2	hrs/month
	Monthly reporting	0.5	hrs/month
	Attending training	6	hrs/year
C.	***Additional Activities***		
	Attending meeting	5	hr/year
	Communication with other dept. (Maintenance, store etc)	5	min/day

31. MEDICAL TECHNOLOGIST, ECG

Sl No	Workload Component	Average Standard	
		Time	Unit
A.	***Health Service Activities***		
	ECG	12	min/pt
	Stress test	3	min/pt
B.	***Support Activities***		
	Requisition to the store for apparatus & others	45	min/mon
	Stock register maintain of apparatus, instruments & others	8	hours/year
	Maintenance of the apparatus, instruments & others	105	min/mon
	Record Keeping	40	min/day
	Monthly reporting/weekly reporting	1	hour/week
	Staff meeting	3	hour/mont
	Attending training	7	days/year
C.	***Additional Activities***		
	All type of communication to superior	2	hr/day

32. MEDICAL TECHNOLOGIST, DENTAL

Sl No	Workload Component	Average Standard	
		Time	Unit
A.	***Health Service Activities***		
	Positioning timing before treatment of patient	25	min/pt
	Treatment with instrument	33	min/pt
	Manual/ Exercise Therapy	40	min/pt
	Patient counseling/advice	15	min/pt
B.	***Support Activities***		
	Requisition to the store for apparatus & others	60	min/year
	Stock register maintain	60	min/year
	Maintenance of the apparatus and instruments	30	min/day
	Record keeping	21	min/day
	Monthly reporting	15	min/mon
	Staff meeting	40	min/mon
C.	***Additional Activities***		
	Attending training	8	days/year
	All type of communication with superior	30	min/year
	Attending professional meeting	6	hour/ year

33. NUTRITIONIST

Sl No	Workload Component	Average Standard	
		Time	Unit
A.	***Health Service Activities***		
	Consultancy General pt	10	min/pt
	Consultancy under 5 children	15	min/pt
B.	***Support Activities***		
	Attending admin/staff meeting	35	min/week
	Attending clinical meeting (CME)	60	min/week
	Monthly reporting	40	min/mon
	Record Keeping	35	min/mon
	Attending Training	7	days/year
	Participating in Seminar/Symposium	1	hr/mon

34. PHARMACY STAFF

Sl No	Workload Component	Average Standard	
		Time	Unit
A.	***Health Service Activities***		
	Compounding, Dispensing the Medicine according to the prescription	4	min/pt
	Describing the rules for taking Medicine to each individual according to the prescription	4	min/pt
B.	***Support Activities***		
	update medicine board	14	min/day
	patient counseling	40	0
	update medicine book for doctors	30	0
	Keeping the weekly indent Medicine for OPD properly	71	min/week
	Collecting Medicine from store, through indents according to need after approval	2	hr/week
	Keeping the accounts of Medicine every day	1	hr/day
	Receiving the medicines from suppliers	1	hr/week
	Maintaining the stock of medicine	44	min/day
	Staff Meeting	10	min/day
	Training	4	hr/month
	Monthly reporting	6	hr/month
C.	***Additional Activities***		
	Making Roaster for the Pharmacy Staffs	3	hr/month
	All types of communications with the superior	2	hr/week
	Staff Meeting	13	min/day

35. SUB ASSISTANT COMMUNITY MEDICAL OFFICER (SACMO)

Sl No	Workload Component	Average Standard	
		Time	Unit
A.	***Health Service Activities***		
1.	**Out-Patient**		
	Consultancy (General)	10	min/pt
	Consultancy (ANC/PNC)	15	min/pt
	IMCI	15	min/pt
	Dressing	12	min/pt
	Stiching	20	min/pt
	Drainage	15	min/pt
2.	**Emergency**		
	Emergency case management within 24hrs	14	min/pt
B.	***Support Services***		
	Attending staff meeting	3	hr/mon
	Monthly Reporting	74	min/month
	Disaster management	2	days/yr
	Injury certificate issue	1.5	hr/month
	Participate in training program	7	days/yr
	Health education	7	hr/week
	Exam duty	41	days/yr
C.	***Additional Activities***		
	To monitor and supervise the filed level activities (EPI, Surveillance, Vit-A and Deworming Campaign and others program	4	days/yr
	Conducting training program		
	Monitor and supervision of health programs	2	days/yr
	All types of communications with the superior	45	min/week

36. FAMILY WELFARE VISITOR (FWV)

Sl No	Workload Component	Average Standard	
		Time	Unit
A.	***Health Service Activities***		
	At F.W.C		
1.	***MCH Services***		
	Consultancy (ANC)	28	min/pt
	Consultancy (PNC)	28	min/pt
	Consultancy (General)	8	min/pt
	Child health service (under 5)	22	min/pt
	Adolescent reproductive health service	10	min/pt
	Conduct normal delivery	120	min/pt
	Assisted delivery	90	min/pt
	Assist C/S	40	min/pt
	VIA	5	min/pt
	Nutrition - GMP (SAM)	15	min/pt
2.	***Family planning services***		
	Provide (new acceptors)		
	Pill	10	min/pt
	Condom	10	min/pt
	Insert I.U.Ds	20	min/pt
	Give injection	10	min/pt
	Assist Implant	15	min/pt
	Assist Ligation (Tubectomy/Vasectomy)	60	min/pt
	Assist MR	60	min/pt
	Provide (old acceptors)		
	Pill	2	min/pt
	Condom	2	min/pt
	Injection	5	min/pt
	Follow up/management of complications/side effects		
	IUDs	15	min/pt
	Implant	5	min/pt
	Permanent	10	min/pt
	Removal of FP methods (IUD/Implant)	10	min/pt
	Postpartum FP Counseling (FP)	7	hr/week
3.	Conduct health education session	60	min/day
4.	Referral of patients	26	min/pt

Sl No	Workload Component	Average Standard	
		Time	Unit
	At the Field Level- in Satellite Clinic		
	General Pt	8	min/pt
	Antenatal care (ANC)	28	min/pt
	Postnatal care (PNC)	26	min/pt
	Family planning services (pill, condom, injection)		
	Pill	10	min/pt
	Condom	10	min/pt
	Injection	10	min/pt
	Child care	22	min/pt
	Adolescent care	10	min/pt
B.	***Support Activities***		
	Health education session at the community	3	hr/week
	Daily updating of registers (Stock registrar - medicine & contraceptive items, patient register)	40	min/day
	Collect the supplies (medicines, contraceptive items) from UHC	6	hr/month
	Attend satellite clinics with F.W.A.s	1	day/wk
C.	***Additional Activities***		
	Monthly work plan (fixing of clinic days, holding of satellite clinic in villages, home visit, etc.)	25	hr/yr
	Monthly reporting	6	hr/mon
	Infection prevention activities (cleaning, autoclave, boiling, waste disposal, chlorine solution preparation etc)	10	min/day

37. FAMILY WELFARE VISITOR (FWV), MCWC

Sl No	Workload Component	Average Standard	
		Time	Unit
1.	***At FWC/MCWC***		
	Antenatal care including nutrition counseling & services	28	min/pt
	Postnatal care including postpartam FP counseling	28	min/pt
	General patient	8	min/pt
	Child health service (under 5)	22	min/pt
	RTI/STI	10	min/pt
	VIA	5	min/pt
	CBE	5	min/pt
	Adolescent reproductive health service	5	min/pt
	IMCI	11	min/pt
	Conduct normal delivery	120	min/pt
	Assist C/S	40	min/pt
	Assist MR	10	min/pt
2.	**Family Planning Services**		
	Provide (new acceptors)		
	Pill	10	min/pt
	Condom	10	min/pt
	Insert I.U.Ds	20	min/pt
	Give injection	10	min/pt
	Assist Implant	15	min/pt
	Assist Ligation (Tubectomy/Vasectomy)	60	min/pt
	Provide (old acceptors)		
	Pill	5	min/pt
	Condom	5	min/pt
	Injection	5	min/pt
3.	**Referral of Patients**	26	min/pt
B.	***Support Activities***		
	Daily updating of registers (Stock registrar - medicine & contraceptive items, patient register)	40	min/day
	Collect the supplies (medicines, contraceptive items).	1	day/month
	Attending meetings (staff)	3	hr/month
	Participation in training	8	days/yr
C.	***Additional Activities***		
	Monthly reporting	4	hr/mon
	Infection prevention activities (cleaning, autoclave, boiling, waste disposal, chlorine solution preparation etc)	20	min/day

38. COMMUNITY HEALTH CARE PROVIDER (CHCP)

Sl No	Workload Component	Average Standard	
		Time	Unit
A.	***Health Service Activities***		
	General patient	8	min/pt
	Antenatal care	24	min/pt
	Postnatal care	24	min/pt
	Under-5 children	15	min/pt
	Nutrition Services to under-5 children	11	min/pt
	Health education	65	min/day
	Referral (Refer difficult patients to FWC or UHC)	9	min/pt
B.	***Support Activities***		
	Support HA in EPI program at CC	5	hrs/month
	Daily record keeping (All registrar book maintain, medicine stock maintain)	54	min/day
	Monthly Reporting	4	hrs/month
C.	***Additional Activities***		
	Planning for the weekly routine like fixing of clinic days, holding of satellite clinic in villages, home visit, etc.	2	hrs/month
	Meeting (with UHFPO, staff meeting with HA & AHI)	7	hr/month
	Community Group Meeting (17 members of CC)	3	hrs/month
	Community Support Group Meeting/Organize Evaluation meeting	2	hr/2 month
	Meeting with Union Parishad Chairman	3	hr/3 month
	Cleaning supervision	10	min/day

39. FAMILY WELFARE ASSISTANT (FWA)

Sl No	Workload Component	Average Standard	
		Time	Unit
A.	***Health Service Activities***		
	At the Field Level		
	Household Visit (Registration, health education, counseling - antenatal, postnatal, adolescent, FP services)	20	min/pt
	Satellite clinic (Assist FWV)	2	day/month
	ANC, PNC counseling	15	min/pt
	FP service (Counseling & distribution of commodities) -new acceptors	20	min/pt
	FP service (Counseling & distribution of commodities) -Old acceptors	5	min/pt
	At the community clinic		
	Family Planning services (pill, condom, injection with counseling motivation)	20	min/pt
	Counseling of antenatal mother (vit, iron distribution, BP check)	30	min/pt
	Counseling of postnatal mother	30	min/pt
	Adolescent care (9-18 yrs)	15	min/pt
	Health education (group)	40	min/group
B.	***Support Activities***		
	Attend Community Clinic	2	day/week
	EPI camp (Assist HA in TT vaccination, FP services)	2	day/month
	Collect FP supplies from UHC	1	day/month
	Daily updating of Register (Register maintain/ Stock maintain)	40	min/day
	Monthly Reporting (monthly meeting at FWC-30th of each month)	1	day/month
	Meeting (at 15th of each month at FWC, at 1st of month UHC)	2	days/month
	NID Program Vit A Campaign (8 am-4 pm)	16	hrs/year

40. HEALTH ASSISTANT (HA)

Sl No	Workload Component	Average Standard	
		Time	Unit
A.	***Health Service Activities***		
	At the Community Clinic		
	Health education	1	hr/day
	At the Field Level		
	Arrange health camp	2	days/week
	Attend EPI camp	2	days/week
	Vaccination (TT, Vaccination under 5)	8	min/pt
	Door to door service (Antenatal registration, under 5 child registration, health education)	20	min/house
	Health education (group)	1	hr/day
	Antenatal counseling	33	min/pt
	Postnatal counseling	34	min/pt
B.	***Support Activities***		
	Record Keeping (Prepare EPI tali sheet and send to UHC)	8	hr/month
	Attend Community Clinic	12	hrs/week
	Monthly reporting at FWC (to AHI - total union send to UHC)	1	day/month
	Report to AHI (Union)	6	hr/month
	Report send to EPI Technician	6.5	hr/month
	Monthly meeting at UHC	1	day/month
	TT & Vaccine receiving time	2	hr/week
	Attending training	7	days/yr
	Staff meeting	2	day/month
C.	***Additional Activities***		
	All types of communications with the superior	20	min/month

41. HEALTH INSPECTOR (HI)

Sl No	Workload Component	Average Standard	
		Time	Unit
A.	***Health Service Activities***		
	Visit & supervise field level activities at union & community (campaigning of EPI health camp)	2	hr/day
	Monitor HA activities at CC	4	hr/day
B.	***Support Activities***		
	Record keeping	32	hr/month
	Monthly reporting	1	day/month
	Meeting with staff, HA, CHCP at UHC	8	days/month
C.	***Additional Activities***		
	Attending training	7	hr/month
	Attending seminar, health camp	24	hr/month
	Attending NID Program	2	days/year

42. ASSISTANT HEALTH INSPECTOR (AHI)

Sl No	Workload Component	Average Standard	
		Time	Unit
A.	***Health Service Activities***		
	Visit & supervise field level activities at union & community	7	hr/day
	Patient counseling at community facilities	3.5	hr/day
	Health education	8	hr/week
B.	***Support Activities***		
	Record keeping and reporting	6	hr/month
	Meeting with Superior & Staff	12	hr/month
C.	***Additional Activities***		
	Attending training	10	day/year
	Attending seminar, health camp	4	day/year
	Attending ligation camp	6	hr/day
	Attending NID Program	6	hr/day

Annex VII

Required number and WISN Ratio of different categories of staff by facility

Medical College Hospital

Sl No	Staff Category	Sanctioned Number	Current Number	Required Number, Based on WISN	Ratio as per Sanctioned	WISN Ratio	Workforce Problem	Workload Pressure
1	Consultant Surgery	6	6	12	0.46	0.46	Shortage	High
2	Consultant Orthopedics	1	1	6	0.16	0.16	Shortage	High
3	Consultant Obs & Gynae	7	7	13	0.40	0.40	Shortage	High
4	Consultant Ophthalmology	8	8	11	0.69	0.69	Shortage	High
5	Consultant Medicine	12	12	23	0.35	0.35	Shortage	High
6	Consultant Cardiology	4	4	2	2.21	2.21	Surplus	None
7	Consultant Radiology & Imaging	5	5	3	1.87	1.87	Surplus	None
8	Consultant ENT	3	3	9	0.33	0.33	Shortage	High
9	Consultant Dentistry	4	3	4	0.96	0.72	Shortage	High
10	Consultant Burn & Plastic Surgery	1	1	2	0.69	0.69	Shortage	High
11	Consultant Neuromedicine	6	6	3	1.91	1.91	Surplus	None
12	Consultant Anesthesiology	10	10	7	1.39	1.39	Surplus	None
13	Consultant Dermatology	3	3	6	0.53	0.53	Shortage	High

Sl No	Staff Category	Sanctioned Number	Current Number	Required Number, Based on WISN	Ratio as per Sanctioned	WISN Ratio	Workforce Problem	Workload Pressure
14	Consultant Paediatrics	7	7	17	0.40	0.40	Shortage	High
15	Consultant Gastroenterology	2	2	2	0.93	0.93	Shortage	High
16	Consultant Endocrinology	3	1	2	1.73	0.58	Shortage	High
17	Consultant Nephrology	2	2	3	0.65	0.65	Shortage	High
18	Physician, MCH	166	149	208	0.80	0.72	Shortage	High
19	Nurse, MCH	404	394	1,059	0.38	0.37	Shortage	High
	Nurse, MCH (Revised)	1143	1105	1,059	1.08	1.04	Surplus	None
20	Medical Technologist-Lab	9	8	16	0.58	0.51	Shortage	High
21	Medical Technologist, Blood Bank							
22	Medical Technologist, Radiology-Imaging	9	6	6	1.41	0.94	Shortage	High
23	Medical Technologist, EPI							
24	Medical Technologist-Dental	2	2	1	2.04	2.04	Surplus	None
25	Medical Technologist, ECG			2	0.00	0.00	Shortage	High
26	Medical Technologist, Physiotherapy	3	3	5	0.56	0.56	Shortage	High

District Hospital A

Sl No	Staff Category	Sanctioned Number	Current Number	Required Number, Based on WISN	WISN Ratio as per Sanctioned	WISN Ratio	Workforce Problem	Workload Pressure
1	Consultant Anesthesia	4	2	3	1.52	0.76	Shortage	High
2	Consultant Cardiology	2	2	3	0.73	0.73	Shortage	High
3	Consultant Dental	2	0	2	0.90	0.00	Shortage	High
4	Consultant ENT	1	1	2	0.64	0.64	Shortage	High
5	Consultant Medicine	2	1	18	0.11	0.06	Shortage	High
6	Consultant Obs &Gynae	2	2	6	0.33	0.33	Shortage	High
7	Consultant Ophthalmology	2	1	2	1.32	0.66	Shortage	High
8	Consultant Orthopedics and Physical Medicine	2	1	3	0.78	0.39	Shortage	High
9	Consultant Paediatrics	2	2	3	0.67	0.67	Shortage	High
10	Consultant Pathology	1	1					
11	Consultant Radiology & Imaging	1	1	2	0.85	0.85	Shortage	High
12	Consultant Dermatology	1	1	1	1.02	1.02	Surplus	None
13	Consultant Surgery	2	2	11	0.18	0.18	Shortage	High
14	Physician	30	27	75	0.40	0.36	Shortage	High
15	Nurse-DSH (as per placement before Dec 2016)	184	163	328	0.56	0.50	Shortage	High
	Nurse-DSH (after new placement during Dec 2016)	184	163	328	0.56	0.50	Shortage	High
16	Pathologist	1	1					
17	Pharmacist	4	3					
18	Radiologist	1	0					
19	Medical Technologist, Lab	2	2	3	0.71	0.71	Shortage	High
20	Medical Technologist, Blood Bank	2	2	2	0.92	0.92	Shortage	High
21	Medical Technologist, ECG	1	1	2				
22	Medical Technologist, Dental	1	1	2	0.74	0.74	Shortage	High
23	Medical Technologist, Physiotherapy	1	1	0			Surplus	None
24	Medical Technologist, Radiology-Imaging	1	1	2	0.64	0.64	Shortage	High

District Hospital B

Sl No	Staff Category	Sanctioned Number	Current Number	Required Number, Based on WISN	WISN Ratio as per Sanctioned	WISN Ratio	Workforce Problem	Workload Pressure
1	Consultant Anaesthesiology	2	2	2	1.28	1.28	Surplus	None
2	Consultant Cardiology	2	2	8	0.23	0.23	Shortage	High
3	Consultant ENT	2	1	5	0.43	0.21	Shortage	High
4	Consultant Medicine	2	2	4	0.51	0.51	Shortage	High
5	Consultant Obs&Gynae	2	1	3	0.80	0.40	Shortage	High
6	Consultant Ophthalmology	2	1	Service data Not available				
7	Consultant Orthopaedics and Physical Medicine	2	2	5	0.45	0.45	Shortage	High
8	Consultant Paediatrics	2	1	1	2.78	1.39	Surplus	None
9	Consultant Radiology & Imaging	2	2	1	4.38	4.38	Surplus	None
10	Consultant Dermatology	1	1	3	0.35	0.35	Shortage	High
11	Consultant Surgery	2	2	5	0.44	0.44	Shortage	High
12	Dental Surgeon	1	1					
13	Physician-DSH	33	29	50	0.66	0.58	Shortage	High
14	Nurse-DSH (as per placement before Dec 2016)	166	66	153	1.09	0.43	Shortage	High
	Nurse-DSH (after new placement during Dec 2016)	209	151	153	1.37	0.99	Shortage	High
15	Nutritionist	3	1	Service data Not available				
17	Medical Technologist, Lab	4	3	2	1.84	1.38	Surplus	None
18	Medical Technologist, ECG	1	1	2	0.63	0.63	Shortage	High
19	Medical Technologist, Dental	1	1	2	0.77	0.77	Shortage	High
20	Medical Technologist, Physiotheraphy	1	1					
21	Medical Technologist, Radiology-Imaging	2	1	1	2.20	1.10	Surplus	None

MCWC –A

Sl No	Staff Category	Sanctioned Number	Current Number	Required Number, Based on WISN	WISN Ratio as per Sanctioned	WISN Ratio	Workforce Problem	Workload Pressure	Remarks
1	Physician	1	1	1	1.17	1.17	Surplus	None	MO (MCH-FP) from UHC-C provides anesthesia on call basis
2	Family Welfare Visitor (FWV)	1	4	4	0.23	0.93	Shortage	High	3 FWVs from UHFWC are Deputed here

MCWC- B

Sl No	Staff Category	Sanctioned Number	Current Number	Required Number, Based on WISN	WISN Ratio as per Sanctioned	WISN Ratio	Workforce Problem	Workload Pressure	Remarks
1	Medical Officer (MO)-Clinic	1	2	1	1.18	2.36	Surplus	None	MO MCH-FP from Sadar provides services
3	Family Welfare Visitor (FWV)	2	5	6	0.33	0.83	Shortage	High	3 FWVs from UHFWC are Deputed here

Upazila Health Complex A

Sl No	Staff Category	Sanctioned Number	Current Number	Required Number, Based on WISN	WISN Ratio as per Sanctioned Number	WISN Ratio	Workforce Problem	Workload Pressure
1.	UHFPO	1	1					
2.	J. Consultant Surgery	1	1	Deputed to other facility				
3.	J. Consultant Medicine	1	0	Post Vacant				
4.	J. Consultant. Obs& Gyn	1	0					
5.	J. Consultant Anesthesia	1	0					
6.	J. Consultant Cardiology	1	0					
7.	J. Consultant Child	1	1	Deputed to other facility				
8.	J. Consultant. ENT	1	0	Post Vacant				
9.	J. Consultant (EYE)	1	0					
10.	J. Consultant Orthopedics	1	1	MO working against this post				
11.	J. Consultant Skin &VD	1	0	Post Vacant				
12.	Dental Surgeon	1	0					
13.	Physicians (MO)	7	8	15	0.47	0.53	Shortage	High
14.	SACMO	2	1	2	0.97	0.49	Shortage	High
15.	MT- Laboratory	3	3	1	3.57	3.57	Surplus	None
16.	MT- Radiography	1	1	1	9.00	9.00	Surplus	None
17.	MT- Dental	1	1	1	1.28	1.28	Surplus	None
18.	MT- Physiotherapy	1	0					
19.	Cardiographer	1	1	1	2.85	2.85	Surplus	None
20.	Nurse (old)	10	10	19	0.52	0.52	Shortage	High
	Nurse (new)**	26	22	19	1.36	1.15	Surplus	None
21.	Health Assistant	54	50	63	0.85	0.79	Shortage	High

*2 MO in Deputation, 3 from USC placed here
**Newly posted from Dec 2016

Upazila Health Complex B

Sl No	Staff Category	Sanctioned Number	Current Number	Required Number, Based on WISN	WISN Ratio as per Sanctioned Number	WISN Ratio	Workforce Problem	Workload Pressure
1.	UHFPO	1	1					
2.	J. Consultant Surgery	1	0	Post Vacant				
3.	J. Consultant Medicine	1	0					
4.	J. Consultant. Obs& Gyn	1	0					
5.	J. Consultant Anesthesia	1	0					
6.	Dental Surgeon	1	1	1	2.19	2.19	Surplus	None
7.	Physicians (MO)	7	13	11	0.65	1.21	Surplus	None
8.	Medical Assistant/SACMO	2	2	1	2.86	2.86	Surplus	None
9.	MT- Laboratory	2	1	1	10.00	5.00	Surplus	None
10.	MT- Radiography	1	1	0	27.62	27.62	Surplus	None
11.	MT- Dental	1	1	1	2.00	2.00	Surplus	None
12.	MT- Physiotherapy	1	0					
13.	Cardiographer	1	1	1	2.78	2.78	Surplus	None
14.	Nurse (old)	10	7	13	0.77	0.54	Shortage	High
	Nurse (new)*	23	20	13	1.77	1.54	Surplus	None
15	Health Assistant	101	86	124	0.82	0.69	Shortage	High

*Newly posted from Dec 2016

Upazila Health Complex C

Sl No	Staff Category	Sanctioned Number	Current Number	Required Number, Based on WISN	WISN Ratio as per Sanctioned Number	WISN Ratio	Workforce Problem	Workload Pressure
1.	UHFPO	1	1					
2.	Jr. Consultant-Anesthesia	1	0	Post Vacant				
3.	Jr. Consultant-Gynae	1	1					
4.	Jr. Consultant-Medicine	1	1					
5.	Jr. Consultant-Surgery	1	1					
6.	Assistant Dental Surgeon	1	1	1	6.39	31.96	Surplus	None
7.	Physicians (MO)	6	9	16	0.38	0.57	Shortage	High
8.	SACMO	2	2	3	0.65	0.65	hortage	High
9.	MT- Dental	1	1	1	5.00	5.00	Surplus	None
10.	MT- Laboratory	2	1	4	0.94	0.47	Shortage	High
11.	MT- Radiography	1	1	1	9.16	9.16	Surplus	None
12.	Technician CME	1	1	Data not available				
13.	Nurse (old)	12	10	33	0.36	0.30		
.	Nurse (new)*	22	20	33	0.66	0.60	Shortage	High
14.	Health Assistant	49	37	65	0.75	0.57	Shortage	High

*Newly posted from Dec 2016

Upazila Health Complex D

Sl No	Staff Category	Sanctioned Number	Current Number	Required Number, Based on WISN	WISN Ratio as per Sanctioned Number	WISN Ratio	Workforce Problem	Workload Pressure
1	UHFPO	1	0	Post Vacant				
2	Jr. Consultant-Anesthesia	2	0					
3	Jr. Consultant-Cardiology	1	0					
4	Jr. Consultant-Dermatology	1	0					
5	Jr. Consultant-ENT	1	0					
6	Jr .Consultant-Gynae	1	0					
7	Jr. Consultant-Medicine	1	0					
8	Jr. Consultant-Ophthalmology	1	0					
9	Jr. Consultant- Ortho	1	1					
10	Jr. Consultant-Paediatrics	1	0					
11	Jr. Consultant-Surgery	1	0					
12	Dental Surgeon	1	0					
14	Medical Officer (UHC)	8	7	14	0.58	0.51	Shortage	High
16	Technologist-Cardiology	1	0	Data not available				
17	Technologist Dental	2	2	1	7.69	7.69	Surplus	None
19	Laboratory Technologist	3	3	1	1.20	1.20	Surplus	None
20	Pharmacist	2	2					
21	Technologist Radiology	1	1	Data not available				
22	Nutritionist	1	1	2	0.73	0.73	Shortage	High
23	Physiotherapist	1	0					
24	Technician CME	1	0					
25	Nurse (old)	25	17	23	1.08	0.73	Shortage	High
	Nurse (new)	26	21	23	1.12	0.91	Shortage	High
29	Field Level Assistant (HA)	64	47	70	0.91	0.67	Shortage	High

*Newly posted from Dec 2016

UH&FWC- A

Sl No	Staff Category	Sanctioned Number	Current Number	Required Number, Based on WISN	WISN ratio as per Current Number	Workforce Problem	Workload Pressure
1	Sub Assistant Community Medical Officer (SACMO)	1	0				
2	Family Welfare Visitor (FWV)	1	1	1.00	1.78	Surplus	None

UH&FWC- B

Sl No	Staff Category	Sanctioned Number	Current Number	Required Number, Based on WISN	WISN ratio as per Current Number	Workforce Problem	Workload Pressure
1	Sub Assistant Community Medical Officer (SACMO)	1	1	2.00	0.76	Shortage	High
2	Family Welfare Visitor (FWV)	1	1	2.00	0.60	Shortage	High

UH&FWC-C

Sl No	Staff Category	Sanctioned Number	Current Number	Required Number, Based on WISN	WISN ratio as per Current Number	Workforce Problem	Workload Pressure
1	Sub Assistant Community Medical Officer (SACMO)	1	1	1.00	1.25	Surplus	None
2	Family Welfare Visitor (FWV)	1	1	2.00	0.57	Shortage	High

UH&FWC-D

Sl No	Staff Category	Sanctioned Number	Current Number	Required Number, Based on WISN	WISN ratio as per Current Number	Workforce Problem	Workload Pressure
1	Sub Assistant Community Medical Officer (SACMO)	1	1	1.00	0.82	Shortage	High
2	Family Welfare Visitor (FWV)	1	1	2.00	0.61	Shortage	High

UH&FWC (USC)- E

Sl No	Staff Category	Sanctioned Number	Current Number	Required Number, Based on WISN	WISN Ratio	Workforce Problem	Workload Pressure
1	Medical Officer	1	0				
2	Sub Assistant Community Medical Officer (SACMO)	1	1	2	0.52	Shortage	High
3	Family Welfare Visitor (FWV)	1	1	1.00	1.25	Surplus	None

UH&FWC (USC)- F

Sl No	Staff Category	Sanctioned Number	Current Number	Required Number, Based on WISN	WISN Ratio as per Current Number	Workforce Problem	Workload Pressure
1	Medical Officer	1	0				
2	Sub Assistant Community Medical Officer (SACMO)	1	1	2	0.43	Shortage	High
3	Family Welfare Visitor (FWV)	1	1	1.00	2.00	Surplus	None

UH&FWC (USC)- G

Sl No	Staff category	Sanctioned Number	Current Number	Required Number, Based on WISN	WISN ratio	Workforce Problem	Workload Pressure
1	Medical Officer	1	1	4	0.24	Shortage	High
2	Sub Assistant Community Medical Officer (SACMO)	1	0				

Required number and WISN ratio for Family Welfare Assistant (FWA) by Union

Sl No	Staff Category	Sanctioned Number	Current Number	Required Number, Based on WISN	Ratio as per Sanctioned Number	WISN Ratio	Workforce Problem	Workload Pressure
1	Union A	5	4	6.00	0.85	0.68	Shortage	High
2	Union B	6	3	5.00	1.11	0.56	Shortage	High
3	Union C	7	5	7.00	0.99	0.70	Shortage	High
4	Union D	7	7	7.00	1.08	1.08	Surplus	None
5	Union E	8	5	10.00	0.82	0.51	Shortage	High
6	Union F	5	2	5.00	1.04	0.42	Shortage	High
7	Union G	6	4	4.00	1.50	1.00	Balance	Normal

Required number and WISN ratio for Community Health Care Provider (CHCP) by Community Clinic (CC)

Sl No	Community Clinic	Sanctioned Number	Current Number	Required Number, Based on WISN	WISN Ratio	Workforce Problem	Workload Pressure	Workload Pressure
1.	Community Clinic A	1	1	2.00	0.59	Shortage	High	
2.	Community Clinic B	1	1	2.00	0.61	Shortage	High	
3.	Community Clinic C	1	1	1.00	1.24	Surplus	None	
4.	Community Clinic D	1	1	2.00	0.56	Shortage	High	

Annex VIII

Human Resource for Health (HRH) Projection for next 15 years

Medical College Hospital

Sl No	Staff Category	Sanctioned #	Present #	Required # as per WISN	Requirement 2021				Requirement 2025				Requirement 2030			
					PF-1	PF-2	Projection -1	Projection -2	PF-1	PF-2	Projection -1	Projection -2	PF-1	PF-2	Projection -1	Projection -2
1	Consultant Surgery	6	6	12	1.13	0.47	14		1.22	0.56	15		1.27	0.61	15	
2	Consultant Orthopedics	1	1	6	1.13	0.47	7		1.22	0.56	7		1.27	0.61	8	
3	Consultant Obs & Gynae	7	7	13	1.13	0.47	15		1.22	0.56	16		1.27	0.61	17	
4	Consultant Ophthalmology	8	8	11	1.13	0.47	12		1.22	0.56	13		1.27	0.61	14	
5	Consultant Medicine	12	12	23	1.13	0.47	26		1.22	0.56	28		1.27	0.61	29	
6	Consultant Cardiology	4	4	2	1.13	0.47	2		1.22	0.56	2		1.27	0.61	3	
7	Consultant Radiology & Imaging	5	5	3	1.13	0.47	3	1	1.22	0.56	4	2	1.27	0.61	4	2
8	Consultant ENT	3	3	9	1.13	0.47	10		1.22	0.56	11		1.27	0.61	11	
9	Consultant Dentistry	4	3	4	1.13	0.47	5		1.22	0.56	5		1.27	0.61	5	
10	Consultant Burn & Plastic Surgery	1	1	1	1.13	0.47	1		1.22	0.56	1		1.27	0.61	1	
11	Consultant Neuromedicine	6	6	2	1.13	0.47	2		1.22	0.56	2		1.27	0.61	3	
12	Consultant Anesthesiology	10	10	7	1.13	0.47	8		1.22	0.56	9		1.27	0.61	9	
13	Consultant Skin-VD	3	3	6	1.13	0.47	7		1.22	0.56	7		1.27	0.61	8	
14	Consultant Pediatrics	7	7	12	1.13	0.47	14		1.22	0.56	15		1.27	0.61	15	
15	Consultant Gastroenterology	2	2	2	1.13	0.47	2		1.22	0.56	2		1.27	0.61	3	

Sl No	Staff Category	Sanctioned #	Present #	Required # as per WISN	Requirement 2021				Requirement 2025				Requirement 2030			
					PF-1	PF-2	Projection -1	Projection -2	PF-1	PF-2	Projection -1	Projection -2	PF-1	PF-2	Projection -1	Projection -2
16	Consultant Endocrinology	3	1	1	1.13	0.47	1		1.22	0.56	1		1.27	0.61	1	
17	Consultant Nephrology	2	2	4	1.13	0.47	5		1.22	0.56	5		1.27	0.61	5	
18	Physician, MCH	166	149	146	1.13	0.47	165		1.22	0.56	179		1.27	0.61	185	
19	Physician, DSH	0	0	0	1.13	0.47	0		1.22	0.56	0		1.27	0.61	0	
20	Physician, MCWC	0	0	0	1.13	0.47	0		1.22	0.56	0		1.27	0.61	0	
21	Physician, UHC	0	0	0	1.13	0.47	0		1.22	0.56	0		1.27	0.61	0	
22	Physician, Union	0	0	0	1.13	0.47	0		1.22	0.56	0		1.27	0.61	0	
23	Nurse, MCH	351	1200	479	1.13	0.47	542		1.22	0.56	587		1.27	0.61	608	
24	Nurse, DSH	0	0	0	1.13	0.47	0		1.22	0.56	0		1.27	0.61	0	
25	Nurse, UHC	0	0	0	1.13	0.47	0		1.22	0.56	0		1.27	0.61	0	
26	Medical Technologist-Lab	9	8	16	1.13	0.47	18	8	1.22	0.56	20	9	1.27	0.61	20	10
27	Medical Technologist, Blood Bank	0	0	0	1.13	0.47	0	0	1.22	0.56	0	0	1.27	0.61	0	0
28	Medical Technologist, Radiology-Imaging	9	6	6	1.13	0.47	7	3	1.22	0.56	7	3	1.27	0.61	8	4
29	Medical Technologist, EPI	0	0	0	1.13	0.47	0	0	1.22	0.56	0	0	1.27	0.61	0	0
30	Medical Technologist-Dental	2	2	1	1.13	0.47	1		1.22	0.56	1		1.27	0.61	1	
31	Medical Technologist, ECG	0	0	2	1.13	0.47	2		1.22	0.56	2		1.27	0.61	3	
32	Medical Technologist, Physiotherapy	3	3	5	1.13	0.47	6	2	1.22	0.56	6	3	1.27	0.61	6	3
33	Nutritionist	0	0	0	1.13	0.47	0		1.22	0.56	0		1.27	0.61	0	
34	Pharmacy Staff	0	0	0	1.13	0.47	0		1.22	0.56	0		1.27	0.61	0	
35	Field Staff-SACMO	0	0	0	1.13	0.47	0		1.22	0.56	0		1.27	0.61	0	
36	Field Staff-FWV	0	0	0	1.13	0.47	0		1.22	0.56	0		1.27	0.61	0	

Sl No	Staff Category	Sanctioned #	Present #	Required # as per WISN	Requirement 2021				Requirement 2025				Requirement 2030			
					PF-1	PF-2	Projection -1	Projection -2	PF-1	PF-2	Projection -1	Projection -2	PF-1	PF-2	Projection -1	Projection -2
37	Field Staff-FWV (MCWC)	0	0	0	1.13	0.47	0		1.22	0.56	0		1.27	0.61	0	
38	Field Staff-CHCP	0	0	0	1.13	0.47	0		1.22	0.56	0		1.27	0.61	0	
39	Field Staff-FWA	0	0	0	1.13	0.47	0		1.22	0.56	0		1.27	0.61	0	
40	Field Staff-HA	0	0	0	1.13	0.47	0		1.22	0.56	0		1.27	0.61	0	
41	Field Staff-FPI	0	0	0	1.13	0.47	0		1.22	0.56	0		1.27	0.61	0	
42	Field Staff-HI	0	0	0	1.13	0.47	0		1.22	0.56	0		1.27	0.61	0	
43	Field Staff-AHI	0	0	0	1.13	0.47	0		1.22	0.56	0		1.27	0.61	0	
44	Support Staff															
1	Sr level Administrative Official	4	3	3	1.13	0.47	3		1.22	0.56	4		1.27	0.61	4	
2	Administrative Official	7	4	14	1.13	0.47	16		1.22	0.56	17		1.27	0.61	18	
3	Inspector-FP services	0	0	0	1.13	0.47	0		1.22	0.56	0		1.27	0.61	0	
4	Inspector-Health services	0	0	0	1.13	0.47	0		1.22	0.56	0		1.27	0.61	0	
5	Bio-Statistician	1	0	1	1.13	0.47	1		1.22	0.56	1		1.27	0.61	1	
6	Technical Staff, CME	14	8	19	1.13	0.47	21		1.22	0.56	23		1.27	0.61	24	
7	Office Asstt	44	34	44	1.13	0.47	50		1.22	0.56	54		1.27	0.61	56	
8	Kitchen Staff	28	13	50	1.13	0.47	57		1.22	0.56	61		1.27	0.61	63	
9	Laundry Staff	5	3	16	1.13	0.47	18		1.22	0.56	20		1.27	0.61	20	
10	Attendant	249	124	400	1.13	0.47	452		1.22	0.56	490		1.27	0.61	508	
11	Transport Staff	8	8	25	1.13	0.47	28		1.22	0.56	31		1.27	0.61	32	
12	Security Staff	17	4	107	1.13	0.47	121		1.22	0.56	131		1.27	0.61	136	
13	Cleaning Staff	138	86	300	1.13	0.47	339		1.22	0.56	367		1.27	0.61	381	
14	Mortuary Staff	0	0	4	1.13	0.47	5		1.22	0.56	5		1.27	0.61	5	
15	Other Staff	4	3	6	1.13	0.47	7		1.22	0.56	7		1.27	0.61	8	

District Hospital A

Sl No	Staff Category	Sanctioned #	Present #	Required # as per WISN	Requirement 2021				Requirement 2025				Requirement 2030			
					PF-1	PF-2	Projection -1	Projection -2	PF-1	PF-2	Projection -1	Projection -2	PF-1	PF-2	Projection -1	Projection -2
1	Consultant Anaesthesia	4	2	3	1.13	0.47	3		1.22	0.56	4		1.27	0.61	4	
2	Consultant Cardiology	2	2	3	1.13	0.47	3		1.22	0.56	4		1.27	0.61	4	
3	Consultant Dental	2	0	2	1.13	0.47	2		1.22	0.56	2		1.27	0.61	3	
4	Consultant ENT	1	1	2	1.13	0.47	2		1.22	0.56	2		1.27	0.61	3	
5	Consultant Medicine	2	1	17	1.13	0.47	19		1.22	0.56	21		1.27	0.61	22	
6	Consultant Obs&Gynae	2	2	4	1.13	0.47	5		1.22	0.56	5		1.27	0.61	5	
7	Consultant Ophthalmology	2	1	5	1.13	0.47	6		1.22	0.56	6		1.27	0.61	6	
8	Consultant Orthopaedics and Physical Medicine	2	1	3	1.13	0.47	3		1.22	0.56	4		1.27	0.61	4	
9	Consultant Paediatrics	2	2	2	1.13	0.47	2		1.22	0.56	2		1.27	0.61	3	
10	Consultant Pathology	1	1	0	1.13	0.47	0		1.22	0.56	0		1.27	0.61	0	
11	Consultant Radiology &Imagaing	1	1	1	1.13	0.47	1		1.22	0.56	1		1.27	0.61	1	
12	Consultant Skin-VD	1	1	1	1.13	0.47	1		1.22	0.56	1		1.27	0.61	1	
13	Consultant Surgery	2	2	10	1.13	0.47	11		1.22	0.56	12		1.27	0.61	13	
14	Physician	30	27	52	1.13	0.47	59		1.22	0.56	64		1.27	0.61	66	
15	Nurse	184	163	144	1.13	0.47	163		1.22	0.56	176		1.27	0.61	183	
16	Pathologist	1	1	0	1.13	0.47	0	0	1.22	0.56	0	0	1.27	0.61	0	0
17	Pharmacist	4	3	0	1.13	0.47	0		1.22	0.56	0		1.27	0.61	0	
18	Radiologist	1	0	0	1.13	0.47	0	0	1.22	0.56	0	0	1.27	0.61	0	0
19	Laboratory Technologist	2	2	3	1.13	0.47	3	1	1.22	0.56	4	2	1.27	0.61	4	2

Sl No	Staff Category	Sanctioned #	Present #	Required # as per WISN	Requirement 2021				Requirement 2025				Requirement 2030			
					PF-1	PF-2	Projection -1	Projection -2	PF-1	PF-2	Projection -1	Projection -2	PF-1	PF-2	Projection -1	Projection -2
20	Laboratory Technologist Blood Bank	2	2	2	1.13	0.47	2	1	1.22	0.56	2	1	1.27	0.61	3	1
21	Technologist Cardiology	1	1	2	1.13	0.47	2	1	1.22	0.56	2	1	1.27	0.61	3	1
22	Technologist Dental	1	1	2	1.13	0.47	2		1.22	0.56	2		1.27	0.61	3	
23	Technologist Physiotheraphy	1	1	0	1.13	0.47	0	0	1.22	0.56	0	0	1.27	0.61	0	0
24	Technologist Radiology-Imaging	1	1	2	1.13	0.47	2	1	1.22	0.56	2	1	1.27	0.61	3	1
26	Support Staff															
1	Sr level Administrative Official	1	1	2	1.13	0.47	2		1.22	0.56	2		1.27	0.61	3	
2	Administrative Official	4	2	8	1.13	0.47	9		1.22	0.56	10		1.27	0.61	10	
3	Inspector-FP services	0	0	0	1.13	0.47	0		1.22	0.56	0		1.27	0.61	0	
4	Inspector-Health services	0	0	0	1.13	0.47	0		1.22	0.56	0		1.27	0.61	0	
5	Bio-Statistician	1	1	1	1.13	0.47	1		1.22	0.56	1		1.27	0.61	1	
6	Technical Staff, CME	2	2	4	1.13	0.47	5		1.22	0.56	5		1.27	0.61	5	
7	Office Asstt	34	25	12	1.13	0.47	14		1.22	0.56	15		1.27	0.61	15	
8	Kitchen Staff	6	2	10	1.13	0.47	11		1.22	0.56	12		1.27	0.61	13	
9	Laundry Staff	1	1	9	1.13	0.47	10		1.22	0.56	11		1.27	0.61	11	
10	Attendant	3	0	100	1.13	0.47	113		1.22	0.56	122		1.27	0.61	127	
11	Transport Staff	2	2	21	1.13	0.47	24		1.22	0.56	26		1.27	0.61	27	
12	Security Staff	0	0	21	1.13	0.47	24		1.22	0.56	26		1.27	0.61	27	
13	Cleaning Staff	16	6	53	1.13	0.47	60		1.22	0.56	65		1.27	0.61	67	
14	Mortuary Staff	0	0	0	1.13	0.47	0		1.22	0.56	0		1.27	0.61	0	
15	Other Staff	3	3	1	1.13	0.47	1		1.22	0.56	1		1.27	0.61	1	

District Hospital B

Sl No	Staff Category	Sanctioned #	Present #	Required # as per WISN	Requirement 2021				Requirement 2025				Requirement 2030			
					PF-1	PF-2	Projection -1	Projection -2	PF-1	PF-2	Projection -1	Projection -2	PF-1	PF-2	Projection -1	Projection -2
1	Consultant Anaesthesiology	2	2	3	1.13	0.47	3		1.22	0.56	4		1.27	0.61	4	
2	Consultant Cardiology	2	2	7	1.13	0.47	8		1.22	0.56	9		1.27	0.61	9	
3	Consultant ENT	2	1	5	1.13	0.47	6		1.22	0.56	6		1.27	0.61	6	
4	Consultant Medicine	2	2	5	1.13	0.47	6		1.22	0.56	6		1.27	0.61	6	
5	Consultant Obs&Gynae	2	1	2	1.13	0.47	2		1.22	0.56	2		1.27	0.61	3	
6	Consultant Ophthalmology	2	1	0	1.13	0.47	0		1.22	0.56	0		1.27	0.61	0	
7	Consultant Orthopaedics and Physical Medicine	2	2	6	1.13	0.47	7		1.22	0.56	7		1.27	0.61	8	
8	Consultant Paediatrics	2	1	1	1.13	0.47	1		1.22	0.56	1		1.27	0.61	1	
9	Consultant Radiology & Imaging	2	2	1	1.13	0.47	1	0	1.22	0.56	1	1	1.27	0.61	1	1
10	Consultant Skin-VD	1	1	3	1.13	0.47	3		1.22	0.56	4		1.27	0.61	4	
11	Consultant Surgery	2	2	4	1.13	0.47	5		1.22	0.56	5		1.27	0.61	5	
12	Dental Surgeon	1	1	0	1.13	0.47	0		1.22	0.56	0		1.27	0.61	0	
13	Physician	33	29	39	1.13	0.47	44		1.22	0.56	48		1.27	0.61	50	
14	Nurse	164	136	77	1.13	0.47	87		1.22	0.56	94		1.27	0.61	98	
15	Dietician/ Nutritionist	3	1	0	1.13	0.47	0		1.22	0.56	0		1.27	0.61	0	
16	Pharmacist	3	1	0	1.13	0.47	0		1.22	0.56	0		1.27	0.61	0	
17	Laboratory Technologist	4	3	2	1.13	0.47	2	1	1.22	0.56	2	1	1.27	0.61	3	1
18	Technologist Cardiology	1	1	2	1.13	0.47	2		1.22	0.56	2		1.27	0.61	3	
19	Technologist Dental	1	1	2	1.13	0.47	2		1.22	0.56	2		1.27	0.61	3	

Sl No	Staff Category	Sanctioned #	Present #	Required # as per WISN	Requirement 2021				Requirement 2025				Requirement 2030			
					PF-1	PF-2	Projection -1	Projection -2	PF-1	PF-2	Projection -1	Projection -2	PF-1	PF-2	Projection -1	Projection -2
20	Technologist Physiotheraphy	1	1	0	1.13	0.47	0	0	1.22	0.56	0	0	1.27	0.61	0	0
21	Technologist Radiology-Imaging	2	1	1	1.13	0.47	1	0	1.22	0.56	1	1	1.27	0.61	1	1
22	Technician CME	2	2	0	1.13	0.47	0		1.22	0.56	0		1.27	0.61	0	
23	Social Welfare Officer	1	1	0	1.13	0.47	0		1.22	0.56	0		1.27	0.61	0	
24	Support Staff				1.13	0.47	0		1.22	0.56	0		1.27	0.61	0	
1	Sr level Administrative Official	0	0	2	1.13	0.47	2		1.22	0.56	2		1.27	0.61	3	
2	Administrative Official	0	0	8	1.13	0.47	9		1.22	0.56	10		1.27	0.61	10	
3	Inspector-FP services	0	0	0	1.13	0.47	0		1.22	0.56	0		1.27	0.61	0	
4	Inspector-Health services	0	0	0	1.13	0.47	0		1.22	0.56	0		1.27	0.61	0	
5	Bio-Statistician	0	0	1	1.13	0.47	1		1.22	0.56	1		1.27	0.61	1	
6	Technical Staff, CME	2	2	4	1.13	0.47	5		1.22	0.56	5		1.27	0.61	5	
7	Office Asstt	14	11	12	1.13	0.47	14		1.22	0.56	15		1.27	0.61	15	
8	Kitchen Staff	6	6	10	1.13	0.47	11		1.22	0.56	12		1.27	0.61	13	
9	Laundry Staff	1	1	9	1.13	0.47	10		1.22	0.56	11		1.27	0.61	11	
10	Attendant	34	32	100	1.13	0.47	113		1.22	0.56	122		1.27	0.61	127	
11	Transport Staff	2	2	21	1.13	0.47	24		1.22	0.56	26		1.27	0.61	27	
12	Security Staff	4	4	21	1.13	0.47	24		1.22	0.56	26		1.27	0.61	27	
13	Cleaning Staff	22	20	53	1.13	0.47	60		1.22	0.56	65		1.27	0.61	67	
14	Mortuary Staff	0	0	0	1.13	0.47	0		1.22	0.56	0		1.27	0.61	0	
15	Other Staff	3	3	1	1.13	0.47	1		1.22	0.56	1		1.27	0.61	1	

Upazila Health Complex A

Sl No	Staff Category	Sanctioned #	Present #	Required # as per WISN	Requirement 2021				Requirement 2025				Requirement 2030			
					PF-1	PF-2	Projection -1	Projection -2	PF-1	PF-2	Projection -1	Projection -2	PF-1	PF-2	Projection -1	Projection -2
1	Junior Consultant (Surgery)	1	1	0	1.13	0.47	0		1.22	0.56	0		1.27	0.61	0	
2	Junior Consultant (Medicine)	1	0	0	1.13	0.47	0		1.22	0.56	0		1.27	0.61	0	
3	Junior Consultan t(Gynae)	1	0	0	1.13	0.47	0		1.22	0.56	0		1.27	0.61	0	
4	Junior Consultant (Anaesthesia)	1	0	0	1.13	0.47	0		1.22	0.56	0		1.27	0.61	0	
5	Junior Consultant (Cardiologist)	1	0	0	1.13	0.47	0		1.22	0.56	0		1.27	0.61	0	
6	Junior Consultant (Child)	1	1	0	1.13	0.47	0		1.22	0.56	0		1.27	0.61	0	
7	Junior Consultant (ENT)	1	0	0	1.13	0.47	0		1.22	0.56	0		1.27	0.61	0	
8	Junior Consultant (EYE)	1	0	0	1.13	0.47	0		1.22	0.56	0		1.27	0.61	0	
9	Junior Consultant (Orthopaedics)	1	1	0	1.13	0.47	0		1.22	0.56	0		1.27	0.61	0	
10	Junior Consultant (Skin & Sex)	1	0	0	1.13	0.47	0		1.22	0.56	0		1.27	0.61	0	
11	Dental Surgeon	1	0	0	1.13	0.47	0		1.22	0.56	0		1.27	0.61	0	
12	Assistant Surgeon	4	1	0	1.13	0.47	0		1.22	0.56	0		1.27	0.61	0	
13	Medical Officer	13	8	14	1.13	0.47	16		1.22	0.56	17		1.27	0.61	18	
14	SACMO	10	7	0	1.13	0.47	0		1.22	0.56	0		1.27	0.61	0	
15	Medical Technologist (Laboratory)	3	3	1	1.13	0.47	1	0	1.22	0.56	1	1	1.27	0.61	1	1
16	Medical Technologist (Radiography)	1	1	1	1.13	0.47	1		1.22	0.56	1		1.27	0.61	1	
17	Medical Technologist(Dental)	1	1	1	1.13	0.47	1		1.22	0.56	1		1.27	0.61	1	

Sl No	Staff Category	Sanctioned #	Present #	Required # as per WISN	Requirement 2021				Requirement 2025				Requirement 2030			
					PF-1	PF-2	Projection -1	Projection -2	PF-1	PF-2	Projection -1	Projection -2	PF-1	PF-2	Projection -1	Projection -2
18	Medical Technologist (Physiotherapy)	1	0	0	1.13	0.47	0	0	1.22	0.56	0	0	1.27	0.61	0	0
19	Cardiographer	1	1	1	1.13	0.47	1		1.22	0.56	1		1.27	0.61	1	
20	Medical Technologist, EPI	1	1	0	1.13	0.47	0		1.22	0.56	0		1.27	0.61	0	
21	Nurse	26	22	14	1.13	0.47	16		1.22	0.56	17		1.27	0.61	18	
22	Health Inspector	4	4	0	1.13	0.47	0		1.22	0.56	0		1.27	0.61	0	
23	Assistant Health Inspector	11	11	0	1.13	0.47	0		1.22	0.56	0		1.27	0.61	0	
24	Health Assistant	54	50	63	1.13	0.47	71		1.22	0.56	77		1.27	0.61	80	
25	Support Staff															
1	Sr level Administrative Official	1	1	2	1.13	0.47	2		1.22	0.56	2		1.27	0.61	3	
2	Administrative Official	0	0	5	1.13	0.47	6		1.22	0.56	6		1.27	0.61	6	
3	Inspector-FP services	0	0	0	1.13	0.47	0		1.22	0.56	0		1.27	0.61	0	
4	Inspector-Health services	15	15	0	1.13	0.47	0		1.22	0.56	0		1.27	0.61	0	
5	Bio-Statistician	1	1	1	1.13	0.47	1		1.22	0.56	1		1.27	0.61	1	
6	Technical Staff, CME	0	0	3	1.13	0.47	3		1.22	0.56	4		1.27	0.61	4	
7	Office Asstt	8	6	6	1.13	0.47	7		1.22	0.56	7		1.27	0.61	8	
8	Kitchen Staff	2	2	4	1.13	0.47	5		1.22	0.56	5		1.27	0.61	5	
9	Laundry Staff	0	0	9	1.13	0.47	10		1.22	0.56	11		1.27	0.61	11	
10	Attendant	18	18	34	1.13	0.47	38		1.22	0.56	42		1.27	0.61	43	
11	Transport Staff	1	1	14	1.13	0.47	16		1.22	0.56	17		1.27	0.61	18	
12	Security Staff	2	2	5	1.13	0.47	6		1.22	0.56	6		1.27	0.61	6	
13	Cleaning Staff	5	5	11	1.13	0.47	12		1.22	0.56	13		1.27	0.61	14	
14	Mortuary Staff	0	0	0	1.13	0.47	0		1.22	0.56	0		1.27	0.61	0	
15	Other Staff	0	0	2	1.13	0.47	2		1.22	0.56	2		1.27	0.61	3	

Upazila Health Complex B

Sl No	Staff Category	Sanctioned #	Present #	Required # as per WISN	Requirement 2021				Requirement 2025				Requirement 2030			
					PF-1	PF-2	Projection -1	Projection -2	PF-1	PF-2	Projection -1	Projection -2	PF-1	PF-2	Projection -1	Projection -2
1	Junior Consultant (Surgery)	1	0	0	1.13	0.47	0		1.22	0.56	0		1.27	0.61	0	
2	Junior Consultant (Medicine)	1	1	0	1.13	0.47	0		1.22	0.56	0		1.27	0.61	0	
3	Junior Consultant (Gynae)	1	1	0	1.13	0.47	0		1.22	0.56	0		1.27	0.61	0	
4	Junior Consultant (Anaesthesia)	1	1	0	1.13	0.47	0		1.22	0.56	0		1.27	0.61	0	
5	Dental Surgeon	1	1	1	1.13	0.47	1		1.22	0.56	1		1.27	0.61	1	
6	Assistant Surgeon	13	7	0	1.13	0.47	0		1.22	0.56	0		1.27	0.61	0	
7	Medical Officer	12	14	11	1.13	0.47	12		1.22	0.56	13		1.27	0.61	14	
8	Medical Assistant/ SACMO	10	7	0	1.13	0.47	0		1.22	0.56	0		1.27	0.61	0	
9	Medical Technologist (Laboratory)	2	1	1	1.13	0.47	1	0	1.22	0.56	1	1	1.27	0.61	1	1
10	Medical Technologist (Radiography)	1	1	0	1.13	0.47	0		1.22	0.56	0		1.27	0.61	0	
11	Medical Technologist (Dental)	1	1	2	1.13	0.47	2		1.22	0.56	2		1.27	0.61	3	
12	Medical Technologist (Physiotherapy)	1	0	0	1.13	0.47	0	0	1.22	0.56	0	0	1.27	0.61	0	0
13	Cardiographer	1	1	1	1.13	0.47	1		1.22	0.56	1		1.27	0.61	1	
14	Medical Technologist, EPI	1	1	0	1.13	0.47	0		1.22	0.56	0		1.27	0.61	0	
15	Nurse	9	7	43	1.13	0.47	49		1.22	0.56	53		1.27	0.61	55	
16	Sanitary Inspector	1	1	0	1.13	0.47	0		1.22	0.56	0		1.27	0.61	0	
17	Health Inspector	6	4	0	1.13	0.47	0		1.22	0.56	0		1.27	0.61	0	
18	Assistant Health Inspector	20	20	0	1.13	0.47	0		1.22	0.56	0		1.27	0.61	0	

Sl No	Staff Category	Sanctioned #	Present #	Required # as per WISN	Requirement 2021				Requirement 2025				Requirement 2030			
					PF-1	PF-2	Projection -1	Projection -2	PF-1	PF-2	Projection -1	Projection -2	PF-1	PF-2	Projection -1	Projection -2
19	Health Assistant	101	86	124	1.13	0.47	140		1.22	0.56	152		1.27	0.61	157	
20	Support Staff				1.13	0.47	0		1.22	0.56	0		1.27	0.61	0	
1	Sr level Administrative Official	1	1	2	1.13	0.47	2		1.22	0.56	2		1.27	0.61	3	
2	Administrative Official	0	0	5	1.13	0.47	6		1.22	0.56	6		1.27	0.61	6	
3	Inspector-FP services	0	0	0	1.13	0.47	0		1.22	0.56	0		1.27	0.61	0	
4	Inspector-Health services	27	26	0	1.13	0.47	0		1.22	0.56	0		1.27	0.61	0	
5	Bio-Statistician	1	1	1	1.13	0.47	1		1.22	0.56	1		1.27	0.61	1	
6	Technical Staff, CME	1	1	3	1.13	0.47	3		1.22	0.56	4		1.27	0.61	4	
7	Office Asstt	6	6	6	1.13	0.47	7		1.22	0.56	7		1.27	0.61	8	
8	Kitchen Staff	2	2	4	1.13	0.47	5		1.22	0.56	5		1.27	0.61	5	
9	Laundry Staff	0	0	9	1.13	0.47	10		1.22	0.56	11		1.27	0.61	11	
10	Attendant	18	17	34	1.13	0.47	38		1.22	0.56	42		1.27	0.61	43	
11	Transport Staff	1	1	14	1.13	0.47	16		1.22	0.56	17		1.27	0.61	18	
12	Security Staff	7	7	5	1.13	0.47	6		1.22	0.56	6		1.27	0.61	6	
13	Cleaning Staff	0	0	11	1.13	0.47	12		1.22	0.56	13		1.27	0.61	14	
14	Mortuary Staff	0	0	0	1.13	0.47	0		1.22	0.56	0		1.27	0.61	0	
15	Other Staff	0	0	2	1.13	0.47	2		1.22	0.56	2		1.27	0.61	3	

Upazila Health Complex C

Sl No	Staff Category	Sanctioned #	Present #	Required # as per WISN	Requirement 2021				Requirement 2025				Requirement 2030			
					PF-1	PF-2	Projection -1	Projection -2	PF-1	PF-2	Projection -1	Projection -2	PF-1	PF-2	Projection -1	Projection -2
1	Jr. Consultant-Anaesthesia	1	0	0	1.13	0.47	0		1.22	0.56	0		1.27	0.61	0	
2	Jr. Consultant-Gynae	1	1	0	1.13	0.47	0		1.22	0.56	0		1.27	0.61	0	
3	Jr. Consultant-Medicine (MO)	1	1	0	1.13	0.47	0		1.22	0.56	0		1.27	0.61	0	
4	Jr. Consultant-Surgery (MO)	1	1	0	1.13	0.47	0		1.22	0.56	0		1.27	0.61	0	
5	Assistant Dental Surgeon	1	1	1	1.13	0.47	1		1.22	0.56	1		1.27	0.61	1	
6	Medical Officer	4	3	13	1.13	0.47	15		1.22	0.56	16		1.27	0.61	17	
7	SACMO	2	2	0	1.13	0.47	0		1.22	0.56	0		1.27	0.61	0	
8	Technologist Dental	1	1	1	1.13	0.47	1		1.22	0.56	1		1.27	0.61	1	
9	Technologist EPI	1	1	0	1.13	0.47	0		1.22	0.56	0		1.27	0.61	0	
10	Laboratory Technologist	2	1	4	1.13	0.47	5	2	1.22	0.56	5	2	1.27	0.61	5	2
11	Pharmacist	2	2	0	1.13	0.47	0		1.22	0.56	0		1.27	0.61	0	
12	Technologist Radiology-Imaging	1	1	1	1.13	0.47	1	0	1.22	0.56	1	1	1.27	0.61	1	1
13	Technician CME	1	1	0	1.13	0.47	0		1.22	0.56	0		1.27	0.61	0	
14	Nurse	22	19	26	1.13	0.47	29		1.22	0.56	32		1.27	0.61	33	
15	Technologist-Sanitary Inspector	1	1	0	1.13	0.47	0		1.22	0.56	0		1.27	0.61	0	
16	Health Inspector	4	4	0	1.13	0.47	0		1.22	0.56	0		1.27	0.61	0	
17	Assistant health Inspector	10	10	0	1.13	0.47	0		1.22	0.56	0		1.27	0.61	0	
18	Health Assistant	49	37	65	1.13	0.47	73		1.22	0.56	80		1.27	0.61	83	
19	Support Staff	28	17		1.13	0.47	0		1.22	0.56	0		1.27	0.61	0	

Sl No	Staff Category	Sanctioned #	Present #	Required # as per WISN	Requirement 2021				Requirement 2025				Requirement 2030			
					PF-1	PF-2	Projection -1	Projection -2	PF-1	PF-2	Projection -1	Projection -2	PF-1	PF-2	Projection -1	Projection -2
1	Sr level Administrative Official	1	1	2	1.13	0.47	2		1.22	0.56	2		1.27	0.61	3	
2	Administrative Official	0	0	5	1.13	0.47	6		1.22	0.56	6		1.27	0.61	6	
3	Inspector-FP services	0	0	0	1.13	0.47	0		1.22	0.56	0		1.27	0.61	0	
4	Inspector-Health services	14	14	0	1.13	0.47	0		1.22	0.56	0		1.27	0.61	0	
5	Bio-Statistician	1	1	1	1.13	0.47	1		1.22	0.56	1		1.27	0.61	1	
6	Technical Staff, CME	1	1	3	1.13	0.47	3		1.22	0.56	4		1.27	0.61	4	
7	Office Asstt	7	4	6	1.13	0.47	7		1.22	0.56	7		1.27	0.61	8	
8	Kitchen Staff	2	2	4	1.13	0.47	5		1.22	0.56	5		1.27	0.61	5	
9	Laundry Staff	0	0	9	1.13	0.47	10		1.22	0.56	11		1.27	0.61	11	
10	Attendant	10	3	34	1.13	0.47	38		1.22	0.56	42		1.27	0.61	43	
11	Transport Staff	1	1	14	1.13	0.47	16		1.22	0.56	17		1.27	0.61	18	
12	Security Staff	2	2	5	1.13	0.47	6		1.22	0.56	6		1.27	0.61	6	
13	Cleaning Staff	5	1	11	1.13	0.47	12		1.22	0.56	13		1.27	0.61	14	
14	Mortuary Staff	0	0	0	1.13	0.47	0		1.22	0.56	0		1.27	0.61	0	
15	Other Staff	0	0	2	1.13	0.47	2		1.22	0.56	2		1.27	0.61	3	

Upazila Health Complex D

Sl No	Staff Category	Sanctioned #	Present #	Required # as per WISN	Requirement 2021				Requirement 2025				Requirement 2030			
					PF-1	PF-2	Projection -1	Projection -2	PF-1	PF-2	Projection -1	Projection -2	PF-1	PF-2	Projection -1	Projection -2
1	Jr.Consultant-Anaesthesia	2	0	0	1.13	0.47	0		1.22	0.56	0		1.27	0.61	0	
2	Jr.Consultant-Cardiology	1	0	0	1.13	0.47	0		1.22	0.56	0		1.27	0.61	0	
3	Jr.Consultant-Dermatology	1	0	0	1.13	0.47	0		1.22	0.56	0		1.27	0.61	0	
4	Jr.Consultant-ENT	1	0	0	1.13	0.47	0		1.22	0.56	0		1.27	0.61	0	
5	Jr.Consultant-Gynae	1	0	0	1.13	0.47	0		1.22	0.56	0		1.27	0.61	0	
6	Jr.Consultant-Medicine	1	0	0	1.13	0.47	0		1.22	0.56	0		1.27	0.61	0	
7	Jr.Consultant-Ophthalmology	1	0	0	1.13	0.47	0		1.22	0.56	0		1.27	0.61	0	
8	Jr.Consultant-Ortho&Surgery	1	1	0	1.13	0.47	0		1.22	0.56	0		1.27	0.61	0	
9	Jr.Consultant-Paediatrics	1	0	0	1.13	0.47	0		1.22	0.56	0		1.27	0.61	0	
10	Jr.Consultant-Surgery	1	0	0	1.13	0.47	0		1.22	0.56	0		1.27	0.61	0	
11	Dental Surgeon	1	0	0	1.13	0.47	0		1.22	0.56	0		1.27	0.61	0	
12	Assistant Surgeon	8	3	0	1.13	0.47	0		1.22	0.56	0		1.27	0.61	0	
13	Medical Officer	14	8	13	1.13	0.47	15		1.22	0.56	16		1.27	0.61	17	
14	SACMO	20	16	0	1.13	0.47	0		1.22	0.56	0		1.27	0.61	0	
15	Technologist-Cardiology	1	0	0	1.13	0.47	0		1.22	0.56	0		1.27	0.61	0	
16	Technologist Dental	2	2	1	1.13	0.47	1		1.22	0.56	1		1.27	0.61	1	
17	Technologist EPI	1	1	0	1.13	0.47	0		1.22	0.56	0		1.27	0.61	0	
18	Laboratory Technologist	3	3	3	1.13	0.47	3	1	1.22	0.56	4	2	1.27	0.61	4	2
19	Lab Attendent	1	1	0	1.13	0.47	0		1.22	0.56	0		1.27	0.61	0	
20	Pharmacist	2	2	0	1.13	0.47	0		1.22	0.56	0		1.27	0.61	0	

Sl No	Staff Category	Sanctioned #	Present #	Required # as per WISN	Requirement 2021				Requirement 2025				Requirement 2030			
					PF-1	PF-2	Projection -1	Projection -2	PF-1	PF-2	Projection -1	Projection -2	PF-1	PF-2	Projection -1	Projection -2
21	Technologist Radiology &Ima	1	1	0	1.13	0.47	0	0	1.22	0.56	0	0	1.27	0.61	0	0
22	Nutritionist	1	1	2	1.13	0.47	2		1.22	0.56	2		1.27	0.61	3	
23	Physiotherapist	1	0	0	1.13	0.47	0	0	1.22	0.56	0	0	1.27	0.61	0	0
24	Technician CME	1	0	0	1.13	0.47	0		1.22	0.56	0		1.27	0.61	0	
25	Nurse	26	21	22	1.13	0.47	25		1.22	0.56	27		1.27	0.61	28	
26	Technologist-Sanitary Inspector	1	1	0	1.13	0.47	0		1.22	0.56	0		1.27	0.61	0	
27	Health Inspector	4	4	0	1.13	0.47	0		1.22	0.56	0		1.27	0.61	0	
28	Assistant Health Inspector	13	13	0	1.13	0.47	0		1.22	0.56	0		1.27	0.61	0	
29	Support Staff				1.13	0.47	0		1.22	0.56	0		1.27	0.61	0	
1	Sr level Administrative Official	1	1	2	1.13	0.47	2		1.22	0.56	2		1.27	0.61	3	
2	Administrative Official	0	0	5	1.13	0.47	6		1.22	0.56	6		1.27	0.61	6	
3	Inspector-FP services	0	0	0	1.13	0.47	0		1.22	0.56	0		1.27	0.61	0	
4	Inspector-Health services	18	18	0	1.13	0.47	0		1.22	0.56	0		1.27	0.61	0	
5	Bio-Statistician	1	0	1	1.13	0.47	1		1.22	0.56	1		1.27	0.61	1	
6	Technical Staff, CME	1	1	3	1.13	0.47	3		1.22	0.56	4		1.27	0.61	4	
7	Office Asstt	10	6	6	1.13	0.47	7		1.22	0.56	7		1.27	0.61	8	
8	Kitchen Staff	2	0	4	1.13	0.47	5		1.22	0.56	5		1.27	0.61	5	
9	Laundry Staff	0	0	9	1.13	0.47	10		1.22	0.56	11		1.27	0.61	11	
10	Attendant	19	11	34	1.13	0.47	38		1.22	0.56	42		1.27	0.61	43	
11	Transport Staff	1	0	14	1.13	0.47	16		1.22	0.56	17		1.27	0.61	18	
12	Security Staff	2	2	5	1.13	0.47	6		1.22	0.56	6		1.27	0.61	6	
13	Cleaning Staff	5	5	11	1.13	0.47	12		1.22	0.56	13		1.27	0.61	14	
14	Mortuary Staff	0	0	0	1.13	0.47	0		1.22	0.56	0		1.27	0.61	0	
15	Other Staff	0	0	2	1.13	0.47	2		1.22	0.56	2		1.27	0.61	3	

Sl No	Staff Category	Sanctioned #	Present #	Required # as per WISN	Requirement 2021				Requirement 2025				Requirement 2030			
					PF-1	PF-2	Projection -1	Projection -2	PF-1	PF-2	Projection -1	Projection -2	PF-1	PF-2	Projection -1	Projection -2
MCWC A																
1	Physician	1	1	1	1.13	0.47	1		1.22	0.56	1		1.27	0.61	1	
2	Family Welfare Visitor (FWV)	1	1	4	1.13	0.47	5		1.22	0.56	5		1.27	0.61	5	
MCWC B																
1	Medical Officer (MO)-Clinic	1	1	0	1.13	0.47	0		1.22	0.56	0		1.27	0.61	0	
2	Medical Officer (MO)-MCH-FP	1	1	0	1.13	0.47	0		1.22	0.56	0		1.27	0.61	0	
3	Family Welfare Visitor (FWV)	2	2	6	1.13	0.47	7		1.22	0.56	7		1.27	0.61	8	
UH&FWC- A																
1	Sub Assistant Community Medical Officer (SACMO)	1	0	0	1.13	0.47	0		1.22	0.56	0		1.27	0.61	0	
2	Family Welfare Visitor (FWV)	1	1	1	1.13	0.47	1		1.22	0.56	1		1.27	0.61	1	
3	Family Welfare Assistant (FWA)	5	4	6	1.13	0.47	7		1.22	0.56	7		1.27	0.61	8	
UH&FWC-B																
1	Sub Assistant Community Medical Officer (SACMO)	1	1	2	1.13	0.47	2		1.22	0.56	2		1.27	0.61	3	
2	Family Welfare Visitor (FWV)	1	1	2	1.13	0.47	2		1.22	0.56	2		1.27	0.61	3	
3	Family Welfare Assistant (FWA)	6	3	5	1.13	0.47	6		1.22	0.56	6		1.27	0.61	6	
UH&FWC-C																
1	Sub Assistant Community Medical Officer (SACMO)	1	1	1	1.13	0.47	1		1.22	0.56	1		1.27	0.61	1	
2	Family Welfare Visitor (FWV)	1	1	2	1.13	0.47	2		1.22	0.56	2		1.27	0.61	3	
3	Family Welfare Assistant (FWA)	7	5	7	1.13	0.47	8		1.22	0.56	9		1.27	0.61	9	

Sl No	Staff Category	Sanctioned #	Present #	Required # as per WISN	Requirement 2021				Requirement 2025				Requirement 2030			
					PF-1	PF-2	Projection -1	Projection -2	PF-1	PF-2	Projection -1	Projection -2	PF-1	PF-2	Projection -1	Projection -2
UH&FWC-D																
1	Sub Assistant Community Medical Officer (SACMO)	2	1	1	1.13	0.47	1		1.22	0.56	1		1.27	0.61	1	
2	Family Welfare Visitor (FWV)	1	1	2	1.13	0.47	2		1.22	0.56	2		1.27	0.61	3	
3	Family Welfare Assistant (FWA)	7	7	7	1.13	0.47	8		1.22	0.56	9		1.27	0.61	9	
UH&FWC-E																
1	Physician	1	0	0	1.13	0.47	0		1.22	0.56	0		1.27	0.61	0	
2	Sub Assistant Community Medical Officer (SACMO)	1	1	2	1.13	0.47	2		1.22	0.56	2		1.27	0.61	3	
UH&FWC-F																
1	Physician	1	0	0	1.13	0.47	0		1.22	0.56	0		1.27	0.61	0	
2	Sub Assistant Community Medical Officer (SACMO)	1	1	2	1.13	0.47	2		1.22	0.56	2		1.27	0.61	3	
UH&FWC-G																
1	Physician	1	1	4	1.13	0.47	5		1.22	0.56	5		1.27	0.61	5	
2	Sub Assistant Community Medical Officer (SACMO)	1	0	0	1.13	0.47	0		1.22	0.56	0		1.27	0.61	0	
Community Clinic A																
1	CHCP	1	1	2	1.13	0.47	2		1.22	0.56	2		1.27	0.61	3	
Community Clinic B																
1	CHCP	1	1	2	1.13	0.47	2		1.22	0.56	2		1.27	0.61	3	
Community Clinic C																
1	CHCP	1	1	1	1.13	0.47	1		1.22	0.56	1		1.27	0.61	1	
Community Clinic D																
1	CHCP	1	1	2	1.13	0.47	2		1.22	0.56	2		1.27	0.61	3	

Annex IX

Photographs

In-depth interview with different categories of staff at study sites

Field visit by Program Manager, HRMU and sharing of activity standards at field at study sites

Technical Advisory Group (TAG) Meetings

Annex X

Contributors to the report

Bangladesh University of Health Sciences (Study Team)

Prof. Liaquat Ali
Ms. Masuma Mannan
Dr. Mithila Faruque

MOHFW

Dr. Md. Shajedul Hasan
Ms. Nahid Sultana Mallik

MaMoni HSS

Mr. Joby George
Dr. Israt Nayer
Mr. Md. Arshad Hussain
Mr. Imteaz Mannan

Save the Children

Ms. Saraswati Khalsa
Ms. Emily Nagourney

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MCHIP Maternal and Child Health Integrated Program