

HOSPITAL ADMINISTRATION AND MANAGEMENT TRANSFORMATION KEY PERFORMANCE INDICATORS (KPIs) REPORT 2015



Quality Assurance and Standardization Division
Ministry of Health
Royal Government of Bhutan

Hospital Administration and Management Transformation (HAMT) Key Performance Indicators (KPIs) Report 2015

HAMT Program

Quality Assurance and Standardization Division (QASD)

Ministry of Health

Kawang Jangsa

Thimphu 11001

Bhutan

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Compiled by:

1. Mr. Rixin Jamtsho, Deputy Chief Lab Officer

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This report contains the data collected from various healthcare centres under Ministry of Health, Royal Government of Bhutan.

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Acronyms

ABSD	Accelerating Bhutan's Socioeconomic Development
ACO	Assistant Clinical Officer
ALOS	Average Length of Stay
AWT	Average waiting time
BHU-I	Basic Health Unit Grade I
BOR	Bed Occupancy Rate
CMO	Chief Medical Officer
CRRH	Central Regional Referral Hospital
DMS	Department of Medical Services
DRL	Drug Reorder Level
ERRH	Eastern Regional Referral Hospital
ERT	Emergency Response Time
GDMO	General District Medical Officer
GNH	Gross National Happiness
HA	Health Assistant
HAMT	Hospital Administration and Management Transformation
HCDD	Health Care and Diagnostic Division
HISC	Health Information Service Centre
JDWNRH	Jigme Dorji Wangchuk National Referral Hospital
KPI	Key Performance Indicator
MCH	Mother Child Health
OPD	Out Patient Department
ORC	Outreach Clinic
OT	Operation Theatre
QASD	Quality Assurance and Standardization Division
RHU	Reproductive Health Unit
SSCL	Surgical Safety Checklist

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Abstract

Background: Hospital Administration and Management Transformation (HAMI) plays a pivotal role in improving the administration and management aspects of healthcare centres through optimized utilization of available resources, efficient management, enhancing patient satisfaction and by reducing expenditure. However, like many other programs, HAMI program encounters many challenges in the process of initiating HAMI activities due to which, it has not been able to make significant progress towards its mandated task of transforming management and improvement of the healthcare services in the past. With the help of available HAMI KPIs data, we explored to establish a reliable and authentic baseline which would be useful to understand the status of HAMI activities and to frame a strategic plan to achieve some selected targets for improvement of healthcare services in the country.

Methodologies: Despite various challenges, HAMI cluster focal persons could gather almost 95% of the KPIs reports with the help of HAMI members from each healthcare centre for 2015. Reports were collected from the Regional Cluster Focal Persons who collected from all the Hospitals and BHU-Is under their jurisdiction. This HAMI Report 2015 consists of both individual and comparative performance among the three levels of healthcare centres with an average baseline. Reports are shown in total, average and percentage and presented in table and graph for easy comparison.

Results/outcomes: Over a year, system of reporting, reliability and accuracy of the HAMI reports have been remarkably improved. However, HAMI activities need to be roll out to the eight new BHU-Is (Khamdang, Bartsam, Khaling, Tsangpo, Gomdar, Eusa, Chuzergang and Khateykha) which have been recently identified. Two military hospitals (Dewathang & Lungtenphu) and two BHU-1s (Dechencholing & Tencholing) have been left out which need to be given first priority for immediate implementation of HAMI Program.

Conclusion: Outlining the clear terms of reference and reinforcing the roles and responsibilities of HAMI cluster focal persons and coordinators could enhance interest and sense of responsibility in this working team. Recruitment of one more additional technical staff in QASD; introducing a system for monthly meetings and monitoring by HAMI Focal Persons/coordinators at the respective healthcare centres and installation of user friendly software for entering and reporting HAMI KPIs data could further strengthen the HAMI Program thereby improving the overall healthcare services for the people of Bhutan.

1. Introduction

Under the Government's Accelerating Bhutan's Socioeconomic Development (ABSD) Program, Hospital Administration and Management Transformation (HAMT) is one of the initiatives undertaken by Ministry of Health in 2010 with support from McKinsey & Company. HAMT initiative was designed to improve administration and management aspects of healthcare centres by improving the efficiency of management, optimizing the utilization of available resources, enhancing patient satisfaction and reducing expenditures. Thus, HAMT endeavors to facilitate and coordinate quality improvement initiatives in the healthcare centres through regular assessment of the key performance indicators across the healthcare centres and encourages healthcare centres to take tangible measures by using the indicators to improve the quality of healthcare services.

Establishment of KPIs baseline and target was another landmark initiative taken by the Ministry of Health which became the basis for transformation management and improvement of healthcare services. However, like many other programs, HAMT program encountered many challenges in the process of initiating activities for transformation management and improvement of healthcare services. Such as manpower constraints, inadequate communication facilities and poor concept of health professionals on transformation, quality improvement and KPIs were the major challenges. Due to these problems, HAMT program has not been able to make a tangible progress towards its mandated task of transforming management and improvement of healthcare services despite the fact that the HAMT team put an immense effort in compiling the KPIs data's from various healthcare centres. In response to the challenges, Ministry of Health focused on training the HAMT coordinators and cluster focal persons on HAMT activities and KPIs reporting, procurement of laptops and internet facility for effective reporting and feedback system. Now having confronted all the major problems, HAMT cluster focal persons could gather almost 95% of the KPIs reports from each healthcare centres with the support of HAMT members. The compiled KPIs report is aimed at establishing a reliable and authentic baseline data which will be the useful information to understand the status of HAMT activities and to frame a strategic plan to achieve some selected targets for improvement of healthcare services.

2. Objectives

- i. To update the status of the HAMT activities across the country which will be used by the administrators, clinicians; policy makers at the Ministry of Health and other stakeholders to plan realistic budget and human resource to improve the quality of healthcare services.
- ii. To support the healthcare centres in improving the operational efficiency of the system through cost effectiveness and optimum utilization of the resources.
- iii. To help improve the system wide efficiency of material and staff, to eliminate waste, and enhance efficiency and productivity.
- iv. To boost the overall thrust of the Eleventh Five Years Plan that aims to improve the quality of life of Bhutanese people within the overall development philosophy of Gross National Happiness (GNH).

3. Background

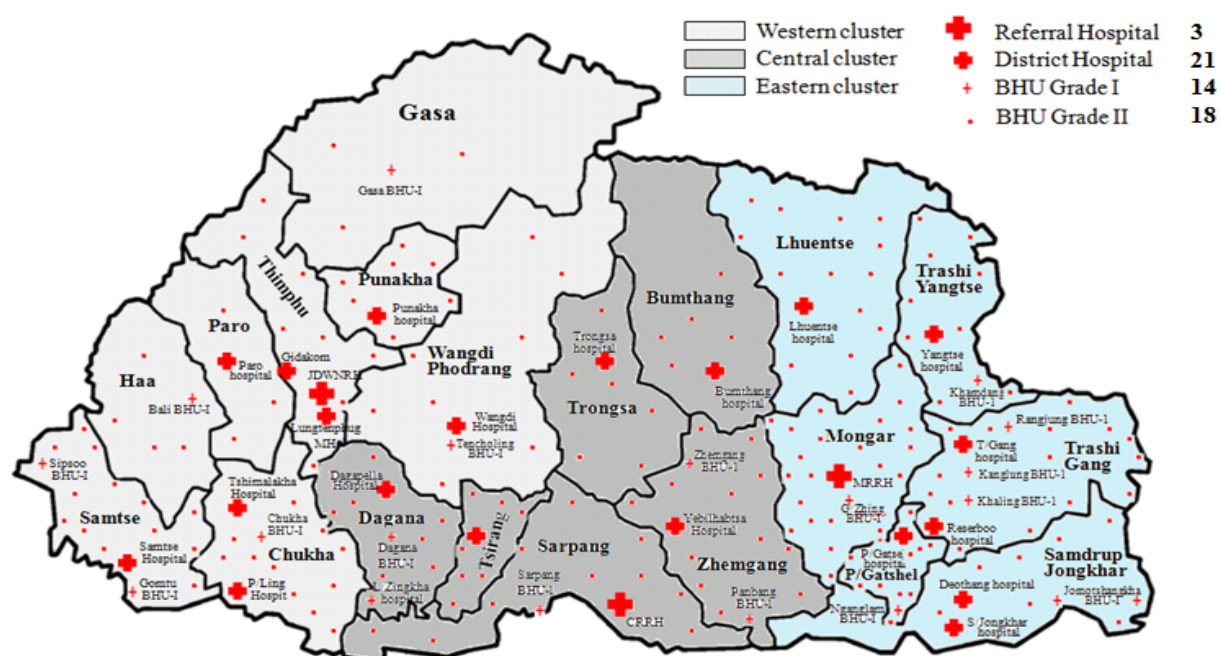
HAMT program was established in the mid 2010 under Health Care and Diagnostic Division (HCDD), Department of Medical Services (DMS) which was later transferred to Quality Assurance and Standardization Division (QASD) in 2013. It was first piloted at Jigme Dorji Wangchuk National Referral Hospital (JDWNRH) wherein operational diagnostic team was formed and identified four key assets for transformation (OT, Wards, OPD and ER). An initial set of ideas were developed and implemented in mid 2010. A significant improvement was observed in those identified transformation areas during the pilot phase and HAMT Program was rolled out to all the 24 hospitals and 14 BHU-Is in 2011 which gradually expanded to the remaining BHU-Is and BHU-IIs. Rolled out was carried out through a Performance Compact signing with Dasho Dzongda, Superintendents and Medical Officers of Referral Hospitals (three), hospitals (24) and BHU-I (14) respectively.

The initial phase of HAMT activities began with formation of a dedicated HAMT team of focal persons and members; identification and selection of Key Performance Indicators (KPIs) and training of the focal persons and team members. Using the 24 KPIs, a system of weekly reporting was introduced wherein healthcare centres reported weekly to the National Focal Person through cluster focal persons. Reporting system was reformed to fortnightly basis which was further changed to monthly basis in 2013. There were some changes in KPIs based on the need and relevancy for improvement and transformation of the healthcare services: hospitals 30 KPIs; BHU-Is 28, KPIs and BHU-IIs 17 KPIs. Currently, healthcare centres are required to submit their reports in the first week of the following month to the cluster focal person and subsequently the cluster focal persons analyze and

send the feedback to the healthcare centres by 2nd week of the following month for information and corrective actions. Thus, MOH has embarked on the HAMT initiative across the healthcare centres to ensure efficient and effective functioning of healthcare centres enabling them to reduce the costs and improve the productivity. With KPIs already on the tracking system, Health Performance of the country will have faster ground-oriented impact through the process of continued implementation of activities targeted towards achieving the key performance indicators. The future endeavor of HAMT Program is to rank and award certificate of appreciation based on the performance of HAMT KPIs and 5S-CQI at different levels of healthcare centres.

4. Organization of HAMT Program

Given the current responsibilities, the QASD is most suited to house the HAMT program. Since the QASD took over its charge, the division has been continuously striving for improvement of the hospitals and BHUs. Therefore, it is relatively easy to extend its mandate to include HAMT activities across healthcare centres in Bhutan. For the purpose of convenient reporting and monitoring HAMT activities, healthcare centres are divided into three regional clusters (Eastern, Central and Western) with the centres based at the three regional referral hospitals. There are total of 6 HAMT cluster focal persons, two from each cluster. This 6 member team focuses 100% of their time on HAMT activities to ensure efficient management of the health system in the country. Each healthcare centres are mandated to have minimum of 5 HAMT members depending on the size of the healthcare centres to ensure efficient functioning of HAMT activities. Currently, HAMT Program covers 3 regional referral hospitals, 21 hospitals, 14 BHU-Is and 36 BHU-IIs. The HAMT activities at the BHU-IIs have not been effectively monitored which needs to be strengthened. Eight BHU-Is have been recently identified where HAMT activities has not been implemented. The remaining healthcare centres will be roll-out in phases gradually. Healthcare centres are distributed under three regional clusters as shown in the map given in the page 11:



5. Distribution of Healthcare Centres by Clusters

Table 1: National and Referral Hospitals

Cluster-I: Eastern Region		Cluster-II: Central Region		Cluster-III: Western Region	
Hospital	Bed Capacity	Hospital	Bed Capacity	Hospital	Bed Capacity
ERRH	150	CRRH	60	JDWNRH	350
Total no. of referral hospitals		1		1	

Table 2: Hospitals

Cluster-I: Eastern Region		Cluster-II: Central Region		Cluster-III: Western Region	
Hospital	Bed Capacity	Hospital	Bed Capacity	Hospital	Bed Capacity
Trashigang	40	Bumthang	20	Paro	40
S/Jongkhar	20	Damphu	20	Samtse	40
Lhuentse	20	Dagapella	20	P/ling	50
T/Yangtse	20	Yebilaptsa	20	Punakha	40
Riserboo	20	Trongsa	20	Gidakom	40
Pemagatshel	20			T/lakha	20
				Gedu	20
				Gomtu	20
				Sibsoo	20
				Bajo	20
Total no. of hospitals		5		10	

Table 3: BHU-Is

Cluster-I: Eastern		Cluster-II: Central		Cluster-III: Western	
BHU-I	Bed Capacity	BHU-I	Bed Capacity	BHU-I	Bed Capacity
Gyelposhing	10	Dagana	10	Bali	10
Kanglung	10	L/Zingkha	10	Chukha	10
Rangjung	10	Panbang	10	Gasa	10
Nganglam	10	Zhemgang	10	Eusa*	
Jomotshangkha	10	Sarpang	10	Khateykha*	
Samdrupcholing	10	Chuzergang*			
Bartsam*	10				
Tsangpo*	10				
Gomdar*	10				
Khaling*					
Khamdang*					
Total no. of BHU-Is	6	5		3	

**Eight BHU-Is have been recently identified by MOH where HAMT activities has not been implemented.*

6. Key Performance Indicators (KPIs) and definitions

Key Performance Indicators (KPIs) are used to measure the function and progress of different levels of healthcare centre. The KPIs are broken down and set as targets for achievement by department and sections. The achievement of these targets is reviewed at regular intervals. KPIs assist the healthcare centres to define and measure progress towards achieving goals and objectives. Once the healthcare centres analyze its mission and define the goal, the progress needs to measure against the goals. Therefore, the KPIs provide measurement tool in the organization. The strategic measures are translated into a series of operational ones across the healthcare centres to endure that the goals are achieved. KPIs as ways in which they can be constructed. For example, patient waiting time at the OPD which is defined as time taken by a patient from reception till examination by a health professional in the chamber. In the recent reformation of the KPIs, each KPI has been assigned a code number and sub code number each KPI matrix to help in data analysis using statistic software like SPSS or a simple excel spread sheet. Some KPIs have been merged under one KPI (example, expenditure: cost for top non drug consumables, stationeries and utility, patient diet are clubbed under one KPI number with Sub KPI code to ease the data analysis. Four KPIs have been added according to the recommendation of the High Level Committee Meeting. KPIs are categorized based on the departments and management section. Currently, there 31 KPIs for Referral and district hospitals, 29 for BHU-Is and 21 for BHU-IIs. The definitions, indications, expected outcomes and units of the KPIs used by HAMT Program in the Ministry of Health in Bhutan is attached in annexure 1.

7. HAMT KPIs Report for 2015

The HAMT KPIs data submitted by HAMT members of the healthcare centres to their respective cluster focal persons were compiled and analyzed using the simple statistic. The KPIs are presented both in table and graphical form, the total and average of KPIs are reported separately for different levels healthcare centres.

7.1. Eastern Cluster

7.1.1. (a) Eastern Cluster BHU-Is Report 2015 in Total numbers

HAMT KPIs Baseline for Eastern Cluster BHU-I								
SI	KPIs	Metrics to be reported	G/shing	R/jung	K/lung	S/Choling	J/ T'kha	Nganglam
1	Patient Admission	No. of patients admitted	342	426	872	707	359	619
2	Mortality	No. of death of patients	0	12	3	1	7	9
3	Patient Referrals	No. of patients referred out	32	42	83	96	42	75
		No. of patient referred in	1	9	9	51	15	42
4	OPD attendance	No. of OPD patient attended	13124	14096	26019	13613	8860	22066
5	Training/Workshop	No. of staff attended In-country training.	27	28	24	39	18	68
		No. of staff attended Ex-country training.	2	1	0	0	0	0
6	Expenditure (Nu)	Top 10 non drug consumables	53512	68298	153655	150335	114336	221347
		Stationery and utility	31439	39496	88050	6815	60496	22361
		Patient Diet	30350	85952	216580	101301	148179	96273
7	Institutional Delivery	No. of delivery conducted	24	29	33	37	31	56
8	Neonatal Death	Number of death of neonate	0	0	0	0	0	0
9	Maternal Death	No. of maternal deaths	0	0	0	0	0	0
10	Staff Utilization	GDMO	2389	5308	10782	3933	5113	3355
		ACO	5893	0	0	1747	209	0
		HA	2510	6270	6981	5549	3265	6504
		Traditional	0	3364	444	561	518	1544
		Eye	0	1439	1014	670	496	1487
		Dental	0	0	2776	604	1267	1612
		Radiology	0	0	0	0	0	360
		Laboratory	46	1285	1826	2582	3033	3432
Pharmacy	8939	11183	18772	11209	8038	16731		

		Minor OT/Dressing room	1511	944	2789	1123	929	2142
		MCH/RHU	2475	1644	2679	2111	2303	6238
11	Emergency Attendance (24X7)	Emergency attended during office hours (9am-3pm)	0	44	110	0	248	297
		Emergency attended after office hours (3pm- 9am)	991	1222	1830	703	355	2265
12	Unavailability of Reagent	No. of reagents out of stock	2	2	74	1	29	0
13	Expiry of X-Ray Film	No. of X-ray films nearing expiry	0	0	0	0	0	0

7.1.1. (b) Eastern Cluster BHU-Is Report 2015 in average and percentage (%)

Sl No.	KPIs	Metrics to be reported	G/shing	R/jung	K/lung	S/Choling	J/kha	N/lam
1	Bed Occupancy Rate (%)	Bed Occupancy Rate	13	40	86	61	53	55
2	Average Length of Stay (days)	Average Length of Stay	1	4	4	3	5	3
3	Staff Unavailability (%)	Percentage unavailability	11	12	10	4	4	16
4	Emergency Response Time (min)	Average emergency response Time	17	9	1	22	6	2
5	Drugs out of stock (%)	Percentage drugs out of stock	1	1	2	3	4	7
6	Laboratory wastage (%)	Percentage Lab Test wastage	0	0	0	0	0	0
7	OPD Waiting Time (min)	OPD waiting Time	8	7	7	7	6	14
8	Infection Control System (%)	Infection Control and Medical Waste Management	76	93	75	81	55	84

7.1.2. (a) Eastern Cluster Hospitals HAMT Report 2015 in total numbers

SI No.	KPIs	Metrics to be reported	Lhuentse	T/Yangtse	T/Gang	R/boo	P/Gatshel	S/ J'khar
1	Patient Admission	No. of patients admitted	813	718	2003	725	1133	1095
2	Mortality	No. of death of patients	5	6	25	5	9	6
3	Patient Referrals	No. of patients referred out	149	73	351	98	85	145
		No. of patient referred in	87	114	328	61	80	161
4	Outpatient Attendance	No. of OPD patient attended	18316	21836	43694	18551	24230	34790
5	Training/Workshop	No. of staff attended In-country training.	50	33	70	56	68	69
		No. of staff attended Ex-country training.	0	1	1	1	2	4
6	Expenditure (Nu.)	Top 10 non drug consumables	154256	176431	466222	146440	198719	222597
		Stationery and utility	363147	55711	273555	89918	214889	126838
		Patient Diet	248225	325272	528642	278734	296350	396292
7	Institutional Delivery	No. of delivery conducted	68	55	238	52	100	72
8	Neonatal Death	No. of death of neonate	0	0	0	0	0	0
9	Maternal Death	No. of Maternal Death	0	0	0	0	0	0
10	Staff Utilization	Specialists	0	0	99	0	0	0
		GDMO	7486	7073	24914	364	7212	8944
		ACO	0	6820	0	7055	2211	8807
		Nurses	0	0	0	0	0	0
		HA	4930	6303	0	0	5105	0
		Traditional	1343	1817	2620	1439	2725	1847
		Eye	1166	1231	3356	1237	1461	3686
		Dental	1694	3020	5617	1060	2441	2773
		Radiology	290	676	2762	245	540	459
		Laboratory	3136	6378	10101	3690	3979	7851
		Pharmacy	12621	16744	32170	13314	18375	22534
		Physiotherapy	1056	740	2069	692	534	1536
		Minor OT/Dressing room	1030	1592	3531	875	1654	582
		MCH/RHU	3324	4070	9297	3257	5239	5247
		Diabetic Clinic						
TB Unit								
Malaria Unit								

11	Emergency Attendance (24X7)	Emergency attended during office hours (9am-3pm)	869	1003	2194	532	1322	3319
		Emergency attended after office hours (3pm- 9am)	848	918	1924	439	991	3260
12	Unavailability of Reagent	Lab Reagent out of stock.	0	11	5	16	0	2
13	Expiry of X-Ray Film	No. of X-ray films near expiry	0	0	0	0	0	0
14	Utilization of OT & SSCL	No. of patients surgery performed	0	0	59	0	0	0
15	Off Hour Clinic Services	No. of patients attended during off hour clinic	0	0	0	0	0	5220

7.1.2. (b) Eastern Cluster Hospital HAMT Report 2015 in average and percentage (%)

SI No.	KPIs	Metrics to be reported	Lhuentse	T/Yangtse	T/Gang	R/boo	P/Gatshel	S/J'khar
1	Bed Occupancy Rate (%)	Bed Occupancy Rate	46	46	59	46	59	71
2	Average Length of Stay (days)	Average Length of Stay	4	5	4	4	4	5
3	Staff Unavailability (%)	Percentage unavailability	12	7	11	4	11	3
4	Emergency Response Time (min)	Average emergency response Time	17	20	10	22	8	12
5	Drugs out of stock (%)	Percentage drugs out of stock	0	0	0	0	2	1
6	Laboratory wastage (%)	Percentage Lab Test wastage	0	0	1	0	0	2
7	OPD Waiting Time (min)	OPD Waiting Time	7	8	6	5	6	11
8	Infection control system (%)	Infection Control and Medical Waste Management	72	89	79	78	83	84
	Utilization of SSCL (%)	Utilization of OT & SSCL (%)	0	0	71	0	0	0

7.1.3. (a) Eastern Cluster Referral Hospital (MRRH) in total numbers

SI No.	KPIs	Metrics to be reported	Total
1	Patient Admission	No. of patients admitted	4976
2	Health Facility Mortality	No. of death of patients	108
3	Patient Referrals	No. of patients referred out	398
		No. of patient referred in	1540
4	Outpatient Attendance	No. of OPD patient attended	90482
5	Training/Workshop	No. of staff attended In-country training.	228
		No. of staff attended Ex-country training.	15
6	Expenditure (Nu.)	Top 10 non drug consumables	1774104
		Stationery and utility	1073419
		Patient Diet	2037576
7	Institutional Delivery	No. of delivery conducted	789
8	Neonatal Deaths	No. of neonatal deaths	17
9	Maternal Death	No. of maternal deaths	1
10	Staff Utilization	Medical	15909
		Surgery	1907
		Gynecology	1409
		Orthopaedic	3666
		Dermatology	0
		Psychiatric	256
		Eye	7381
		ENT (Audiometric)	4579
		Pediatric	7177
		Dental	14806
		Traditional	3918
		GDMO	7581
		ACO	13653
		HA	0
		Radiology	4898
		Laboratory	18920
Pharmacy	57016		
Physiotherapy	4508		
Minor OT/Dressing room	2298		
MCH/RHU	14635		

		TB/Leprosy Unit	551
		HISC	
		ECG & Echo	
		Endoscopy	819
		TB Unit	0
		HISC	0
		ECG & Echo	
11	Emergency Attendance (24X7)	Emergency attended during office hours (9am-3pm)	5358
		Emergency attended after office hours (3pm- 9am)	2988
12	Unavailability of Reagent	No. of reagents out of stock	6
13	Expiry of X-Ray Film	No. of X-ray films nearing expiry	0
14	Utilization of OT & SSCL	No. of patients surgery performed	1496
15	Off Hour Clinic Services	No. of patients attended during off hour clinic	0

7.1.3. (b) Eastern Cluster Referral Hospital (MRRH) Report in average and percentage

SI No.	KPIs	Metrics to be reported	Average and %
1	Bed Occupancy Rate (%)	Bed Occupancy Rate	68
2	Patient Discharge (%)	Percentage of Patient Discharge before 11am	85
3	Average Length of Stay (days)	Average Length of Stay	5
4	Staff Unavailability (%)	Percentage unavailability	7
5	Emergency Response Time (min)	Average emergency response Time for emergency patients	20
6	Drugs out of stock (%)	Percentage drugs out of stock	6
7	Laboratory wastage (%)	Percentage Lab Test wastage	5
8	OPD Waiting Time (min)	OPD Waiting Time	17
9	Infection Control System (%)	Infection Control and Medical Waste Management	82
10	Utilization of Surgical Safety Check List (%)	Percentage utilization of Surgical Safety Check List	62

7.2. Central Cluster

7.2.1. (a) Central Cluster BHU-Is HAMT Report 2015 in total numbers

Sl	KPIs	Metrics to be reported	Dagana	L/Z'kha	P/bang	Z/gang	Sarpang
1	Patient Admission	No. of patients admitted	246	367	500	475	665
2	Mortality	No. of death of patients	6	6	7	1	4
3	Patient Referrals	No. of patients referred out	26	57	49	30	82
		No. of patient referred in	0	0	28	16	11
4	Outpatient Attendance	No. of OPD patient attended	15545	12656	11331	17949	31619
5	Training/Workshop	No. of staff attended In-country training.	19	21	28	26	122
		No. of staff attended Ex-country training.	1	1	0	0	0
6	Expenditure (Nu)	Top 10 non drug consumables	85130	200184	72390	127334	75883
		Stationery and utility	20621	8141	39564	9894	270500
		Patient Diet	54274	141149	160668	12757	213525
7	Institutional Delivery	No. of delivery conducted	17	52	45	36	52
8	Neonatal Death	No. of neonatal death	0	0	0	0	0
9	Maternal Death	No. of maternal deaths	0	0	0	0	0
10	Staff Utilization	GDMO	4119	7824	4320	3969	2444
		ACO	0	0	512	3967	6347
		HA	4801	4673	2714	1135	12592
		Traditional	1057	558	767	576	2306
		Eye	0	368	465	0	1157
		Dental	695	0	0	737	1621
		Radiology	0	0	0	0	487
		Laboratory	1683	3598	2967	1891	5699
		Pharmacy	11760	11005	8320	9475	22260
		Minor OT/Dressing room	1589	1366	709	650	4526
	MCH/RHU	1742	2796	2379	2324	6445	
11	Emergency Attendance (24X7)	Emergency attended during office hours (9am-3pm)	12	256	471	1083	449
		Emergency attended after office hours (3pm- 9am)	775	209	334	735	1897
12	Unavailability of Reagent	No. of reagents out of stock	35	0	0	10	25
13	Expiry of X-Ray Film	No. of X-ray films nearing expiry	0	0	0	0	0

7.2.1. (b) Central Cluster BHU-I HAMT Report 2015 in average and percentage (%)

Sl No.	KPIs	Metrics to be reported	Dagana BHU-I	L/Zhingkha BHU-I	Panbang BHU-I	Zhemgang BHU-I	Sarpang BHU-I
1	Bed Occupancy Rate (%)	Bed Occupancy Rate	22	30	39	26	61
2	Average Length of Stay (days)	Average Length of Stay	3	3	3	2	3
3	Staff Unavailability (%)	Percentage unavailability	9	4	4	2	6
4	Emergency Response Time (min)	Average emergency response Time for emergency patients	2	4	2	2	9
5	Drugs out of stock (%)	Percentage drugs out of stock	1	1	0	0	5
6	Laboratory wastage (%)	Percentage Lab Test wastage	0	0	0	0	0
7	OPD Waiting Time (min)	OPD Waiting Time	5	4	3	3	4
8	Infection Control System (%)	Infection Control and Medical Waste Management	87	68	74	84	93

7.2.2. (a) Central Cluster District Hospital HAMT Report 2015 in total numbers

SI No.	KPIs	Metrics to be reported	Dagapella	Damphu	Bumthang	Trongsa	Yebilhatsa
			Total	Total	Total	Total	Total
1	Patient Admission	No. of patients admitted	800	1774	681	715	921
2	Health Facility Mortality	No. of death of patients	2	22	15	15	4
3	Patient Referrals	No. of patients referred out	86	205	144	80	79
		No. of patient referred in	43	106	40	42	67
4	Outpatient Attendance	No. of OPD patient attended	30653	63471	49340	47372	13878
5	Training/Workshop	No. of staff attended In-country training	48	59	63	39	57
		No. of staff attended Ex-country training	0	3	2	2	0
6	Expenditure (Nu)	Top 10 non drug consumables	157469	211176	202156	145085	109549
		Stationery and utility	60139	141456	70790	59834	94384
		Patient Diet	258107	547296	240468	186682	349323
7	Institutional Delivery	No. of delivery conducted	70	135	121	56	18
8	Neonatal Death	No. of neonatal Death	0	0	0	0	0
9	Maternal Death	No. of Maternal deaths	0	0	0	0	0
10	Staff Utilization	Specialists	0	3038	0	0	0
		GDMO	10727	23235	14981	16785	1954
		ACO	912	2560	0	1668	3252
		Nurse	0	1551	0	0	0
		HA	7303	16634	14758	0	3219
		Traditional	1893	2306	4853	3758	655
		Eye	1798	3833	2918	2142	720
		Dental	2410	5336	5446	2620	967
		Radiology	588	1415	1509	889	638
		Laboratory	3934	26683	7395	13215	2735
		Pharmacy	17901	39861	29625	16327	10694
		Physiotherapy	743	2210	1373	275	35
		Minor OT/Dressing room	4100	5383	3350	2660	2123
MCH/RHU	9462	14104	8555	4657	1755		
11	Emergency Attendance (24X7)	Emergency attended during office hours (9am-3pm)	763	1118	2471	774	815
		Emergency attended after office hours (3pm- 9am)	1309	2575	1790	706	474
12	Unavailability of Reagent	No. of reagents out of stock	37	36	20	13	1

13	Expiry of X-Ray Film	No. of X-ray films nearing expiry	0	0	0	0	0
14	Utilization of OT & SSCL	No. of patients surgery performed	0	360	0	0	0
15	Off Hour Clinic Services	No. of patients attended during off hour clinic	0	0	0	0	0

7.2.2. (b) Central Cluster District Hospital HAMT Report 2015 in average and percentage (%)

Sl No.	KPIs	Metrics to be reported	Dagapella	Damphu	Bumthang	Trongsa	Yebilhatsa
1	Bed Occupancy Rate (%)	Bed Occupancy Rate	34	93	24	36	54
2	Average Length of Stay (days)	Average Length of Stay	3	4	4	4	4
3	Staff Unavailability (%)	Percentage unavailability	6	10	8	9	5
4	Emergency Response Time (min)	Average emergency response Time for emergency patients	7	15	4	5	5
5	Drugs out of stock (%)	Percentage drugs out of stock	1	2	3	1	0
6	Laboratory wastage (%)	Percentage Lab Test wastage	3	0	0	0	0
7	OPD Waiting Time (min)	OPD Waiting Time	6	6	7	5	5
8	Infection Control System (%)	Infection Control and Medical Waste Management	77		82	85	88

7.2.3. (a) Central Cluster Referral Hospital (CRRH) HAMT Report 2015 in total numbers

SI No.	KPIs	Metrics to be reported	Total
1	Patient Admission	No. of patients admitted	3485
2	Health Facility Mortality	No. of death of patients	94
3	Patient Referrals	No. of patients referred out	305
		No. of patient referred in	715
4	Outpatient Attendance	No. of OPD patient attended	120789
5	Training/Workshop	No. of staff attended In-country training.	115
		No. of staff attended Ex-country training.	20
6	Expenditure (Nu)	Top 10 non drug consumables	155823
		Stationery and utility	617317
		Patient Diet	1011303
7	Institutional Delivery	No. of delivery conducted	799
8	Neonatal Deaths	No. of neonatal deaths	9
9	Maternal Death	No. of maternal deaths	0
10	Staff Utilization	Medical	12565
		Surgery	3455
		Gynecology	5013
		Orthopaedic	2723
		Dermatology	0
		Psychiatric	2572
		Eye	11556
		ENT (Eudiometry)	7342
		Pediatric	8656
		Dental	11754
		Traditional	6397
		GDMO	11951
		ACO	10084
		HA	30964
Radiology	4662		
Laboratory	192475		

		Pharmacy	103838
		Physiotherapy	7496
		Minor OT/Dressing room	10463
		MCH/RHU	16035
		TB/Leprosy Unit	673
		HISC	660
		ECG & Echo	885
		Endoscopic unit	618
		Diabetic clinic	2344
			0
27			0
11	Emergency Attendance (24X7)	Emergency attended during office hours (9am-3pm)	2344
		Emergency attended after office hours (3pm- 9am)	10088
12	Unavailability of Reagent	No. of reagents out of stock	0
13	Expiry of X-Ray Film	No. of X-ray films nearing expiry	146
15	Utilization of OT & SSCL	No. of patients surgery performed	1043
15	Off Hour Clinic Services	No. of patients attended during off hour clinic	0

7.2.3. (b) Central Cluster Referral Hospital (CRRH) HAMT Report 2015 in average and percentage (%)

SI No.	KPIs	Metrics to be reported	Total
1	Bed Occupancy Rate (%)	Bed Occupancy Rate	62
2	Patient Discharge (%)	Percentage of Patient Discharge before 11am	75
3	Average Length of Stay (days)	Average Length of Stay	4
4	Staff Unavailability (%)	Percentage unavailability of staff	4
5	Emergency Response Time (min)	Average emergency response Time	2
6	Drugs out of stock (%)	Percentage drugs out of stock	2
7	Laboratory wastage (%)	Percentage Lab Test wastage	0.18
8	OPD Waiting Time (min)	OPD Waiting Time	13
9	Infection Control System (%)	Infection Control and Medical Waste Management	81
10	Utilization of Surgical Safety Check List (%)	Percentage utilization of Surgical Safety Check List	100

7.3. Western Cluster

7.3.1. (a) Western Cluster BHU-Is HAMT Report 2015 in total numbers

SI No.	KPIs	Metrics to be reported	Bali BHU-1	Chukha BHU-I	Gasa BHU-I
1	Patient Admission	No. of patients admitted	349	345	45
2	Health Facility Mortality	No. of death of patients	1	1	1
3	Patient Referrals	No. of patients referred out	52	26	24
		No. of patient referred in	28	0	7
4	Outpatient Attendance	No. of OPD patient attended	27509	10996	4061
5	Training/Workshop	No. of staff attended In-country training.	52	10	16
		No. of staff attended Ex-country training.	1	0	0
6	Expenditure (Nu)	Top 10 non drug consumables	163548	140000	4343
		Stationery and utility	24929	48000	0
		Patient Diet	171646	252213	0
7	Institutional Delivery	No. of delivery conducted	71	24	6
8	Neonatal Death	No. of neonatal deaths	0	0	0
9	Maternal Death	No. of maternal deaths	0	0	0
	Staff Utilization	GDMO	5462	6765	1575
		ACO	8990	0	0
		Nurses	0	0	0
		HA	0	0	1361
		Traditional	3890	2305	421
		Eye	1218	0	0
		Dental	2641	0	468
		Radiology	0	0	0
		Laboratory	10410	4531	701
		Pharmacy	19164	7377	2189
		Minor OT/Dressing room	0	1417	0
		MCH/RHU	8248	3410	912

xvii					
xviii					
11	Emergency Attendance (24X7)	Emergency attended during office hours (9am-3pm)	293	0	116
12		Emergency attended after office hours (3pm- 9am)	1206	1088	116
	Unavailability of Reagent	No. of reagents out of stock	162	0	0
13	Expiry of X-Ray Film	No. of X-ray films nearing expiry	1	0	0

7.3.1. (b) Western Cluster BHU-I HAMT Report 2015 in average and percentages (%)

Sl No.	KPIs	Metrics to be reported	Bali BHU-I	Chukha BHU-I	Gasa BHU-I
1	Bed Occupancy Rate (%)	Bed Occupancy Rate	29	42	2
2	Average Length of Stay (days)	Average Length of Stay	3	5	2
3	Staff Unavailability (%)	Percentage unavailability	0	0	2
4	Emergency Response Time (min)	Average emergency response Time for emergency patients	5	10	5
5	Drugs out of stock (%)	Percentage drugs out of stock	4	3	0
6	Laboratory wastage (%)	Percentage Lab Test wastage	0	0	0
7	OPD Waiting Time (min)	OPD waiting Time	7	7	6
8	Infection Control System (%)	Infection Control and Medical Waste Management	86	71	0

7.3.2. (a) Western Cluster Hospitals HAMT Report 2015 in total numbers

SI No.	KPIs	Metrics to be reported	Paro	P/Ling	Samtse	P/kha	G/kom	Bajo	Gedu	Gomtu	Sipsoo	T/lakha
2	Patient Admission	No. of patients admitted	2775	2485	1853	2500	688	2457	1020	607	1154	539
3	Health Facility Mortality	No. of death of patients	11	54	40	20	7	34	9	7	25	7
4	Patient Referrals	No. of patients referred out	277	191	169	172	56	283	103	90	105	48
		No. of patient referred in	0	289	121	142	0	143	103	0	99	1
5	Outpatient Attendance	No. of OPD patient attended	105705	120304	64265	65297	19850	102155	32610	31640	24313	24558
6	Training/Workshop	No. of staff attended In-country training.	81	48	84	83	30	84	8	13	21	7
		No. of staff attended Ex-country training.	4	5	4	3	2	1	0	0	0	0
7	Expenditure (Nu)	Top 10 non drug consumables	1245023	785674	51132	430565	262252	98492	397354	59276	144386	154774
		Stationery and utility	608335	806123	234254	135025	204043	337855	104284	0	144657	163291
		Patient Diet	459582	805526	610933	616506	881389	459284	396644	283335	470903	330588
8	Institutional Delivery	No. of delivery conducted	465	918	227	508	41	204	0	70	135	62
9	Neonatal Death	No. of neonatal deaths	0	0	0	0	0	0	0	0	0	0
	Maternal Death	No. of Maternal Death	0	0	0	0	0	0	0	0	0	0
10	Staff Utilization	Specialists	4423	3982	1345	0	5349	0	0	0	0	0
		GDMO	37720	0	39871	29157	3624	31484	4033	31640	18871	18623
		ACO	14038	0	0	16572	6867	12487	12917	0	0	0
		HA	0	0	0	0	0	0	0	0	611	0
		Nurses	20816	1646	0	0	0	12838	8330	0	7687	0
		Traditional	11137	1646	2098	4089	883	4447	2390	0	0	1204
		Eye	6903	6578	3726	2509	0	4935	2192	0	999	1189
		Dental	12237	11207	3678	5292	2488	9354	2563	0	1087	1996
		Radiology	3459	3660	1695	1724	923	3484	1281	0	0	898
		Laboratory	15315	223371	14482	9581	3352	139081	9595	56509	17947	5868
		Pharmacy	79132	115923	72215	48079	16685	66636	24658	0	24313	18623
Physiotherapy	0	2993	1700	1065	1828	1816	0	0	0	720		

		Minor OT/Dressing room	7955	8531	3880	8773	132	5029	4334	0	1541	237
		MCH/RHU	17994	52303	10139	13159	4761	14901	7820	0	5660	10702
		Diabetic Clinic										
		TB Unit										
		Malaria Unit										
11	Emergency Attendance (24X7)	Emergency attended during office hours (9am-3pm)	0	16778	0	0	0	322	0	0	0	59
		Emergency attended after office hours (3pm- 9am)	16462	4765	1743	6107	1200	4499	2986	1881	2213	1423
12	Unavailability of Reagent	No. of reagents out of stock	4	8	0	14	0	13	26	8	12	11
13	Expiry of X-Ray Film	No. of X-ray films nearing expiry	0	0	0	107	4	0	0	0	0	0
14	Utilization of OT & SSCL	No. of patients surgery performed	0	627	94	276	0	744	0	0	0	0
15	Off Hour Clinic Services	No. of patients attended during off hour clinic	0	0	0	0	0	0	0	0	0	0

7.3.2. (b) Western Cluster Hospitals HAMT Report 2015 in average and percentage (%)

S I	KPIs	Metrics to be reported	Paro	P/Ling	Samtse	P/kha	G/kom	Bajo	Gedu	Gomtu	Sipsoo	T/lhakh a
1	Bed Occupancy Rate (%)	Bed Occupancy Rate	57	59	60	42	94	99	45	80	49	29
2	Average Length of Stay (days)	Average Length of Stay	3	4	5	2	29	3	3	11	3	4
3	Staff Unavailability (%)	Percentage unavailability	1	1	2	2	1	1	1	1	2	6
4	Emergency Response Time (min)	Average emergency response Time	5	17	10	6	10	14	9	10	9	11
5	Drugs out of stock (%)	Percentage drugs out of stock	3	4	2	4	2	3	2	0	0	1
6	Laboratory wastage (%)	Percentage Lab Test wastage	3	1	0	0	0	0	0	0	0	0
7	OPD Waiting Time (min)	OPD Waiting Time	14	19	6	16	8	7	7	7	10	8
8	Infection Control System (%)	Infection Control and Medical Waste Management	82	78	90	90	70	81	82	62	72	76

7.3.3. (a) Western Cluster National Referral Hospital (JDWNRH) HAMT Report 2015 in total numbers

SI No.	KPIs	Metrics to be reported	Total in a year
1	Patient Admission	No. of patients admitted	16487
2	Health Facility Mortality	No. of death of patients	612
3	Patient Referrals	No. of patients referred out	1093
		No. of patient referred in	2618
4	Outpatient Attendance	No. of OPD patient attended	454840
5	Training/Workshop	No. of staff attended In-country training.	778
		No. of staff attended Ex-country training.	
6	Expenditure (Nu)	Top 10 non drug consumables	
		Stationery and utility	1046474
		Patient Diet	4900729
7	Institutional Delivery	No. of delivery conducted	4990
8	Neonatal Deaths	No. of neonatal deaths	55
9	Maternal Death	No. of maternal deaths	14
10	Staff Utilization	Medical	41225
		Surgery	15819
		Gynecology	18171
		Orthopaedic	19518
		Dermatology	20191
		Psychiatric	11276
		Eye	39338
		ENT (Audiometric)	32987
		Pediatric	63588
		Dental	62278
		Traditional	
		HA	17937
		ACO	26000
		GDMO	21035
		Radiology	26812
		Laboratory	1129383
		Pharmacy	388972
Physiotherapy	36796		
Minor OT/Dressing room	0		
MCH/RHU	66625		

		TB/Leprosy Unit	
		HISC	
		ECG & Echo	
		Endoscopic unit	3300
		Diabetic clinic	
		TB/Leprosy Unit	
		Malaria unit	
11	Emergency Attendance (24X7)	Emergency attended during office hours (9am-3pm)	
		Emergency attended after office hours (3pm- 9am)	35588
12	Unavailability of Reagent	No. of reagents out of stock	
13	Expiry of X-Ray Film	No. of X-ray films nearing expiry	
14	Utilization of OT & SSCL	No. of patients surgery performed	81
15	Off Hour Clinic Services	No. of patients attended during off hour clinic	25493

7.3.3. (b) Western Cluster National Referral Hospital (JDWNRH) HAMT Report 2015 in average and percentage (%)

SI No.	KPIs	Metrics to be reported	Average & %
1	Bed Occupancy Rate (%)	Bed Occupancy Rate	77
2	Patient Discharge (%)	Percentage of Patient Discharge before 11am	44%
3	Average Length of Stay (days)	Average Length of Stay	6
4	Staff Unavailability (%)	Percentage staff unavailability	5
5	Emergency Response Time (min)	Average emergency response Time for consultation of emergency patients	10
6	Drugs out of stock (%)	Percentage drugs out of stock	-
7	Laboratory wastage (%)	Percentage Lab Test wastage	-
8	OPD Waiting Time (min)	OPD Waiting Time	60
9	Infection Control System (%)	Infection Control and Medical Waste Management	81
10	Utilization of SSCL (%)	Percentage utilization of Surgical Safety Check List	40

Total HAMT KPI baseline for three categories of Healthcare centres in total numbers

	KPIs	Matrix of KPIs	National Referral Hospital Baseline	Regional Referral hospital Baseline	District Hospital Baseline	BHU-I Baseline
1	Patient Admission	No. of patients admitted	16487	4231	1307	451
2	Health Facility Mortality	No. of death of patients	612	101	16	4
3	Patient Referrals	No. of patients referred out	1093	352	142	51
		No. of patient referred in	2618	1128	97	16
4	Outpatient Attendance	No. of OPD patient attended	454840	105636	45563	16389
5	Training/Workshop	No. of staff attended In-country training	778	172	51	36
		No. of staff attended Ex-country training	0	18	2	0
6	Expenditure (Nu.)	Top 10 non drug consumables	0	964963	277097	116450
		Stationery and utility	1046474	845368	204216	47879
		Patient Diet	4900729	1524439	427147	120348
7	Institutional Delivery	No. of delivery conducted	4990	794	172	37
8	Neonatal Death	No. of neonatal deaths	55	13	0	0
9	Maternal Death	No. of maternal deaths	14	1	0	0
11	Emergency Attendance (24X7)	Emergency attended (9am-3pm)	0	3851	1540	241
		Emergency attended (3pm- 9am)	35588	6538	2786	980
12	Unavailability of Reagent	No. of reagents out of stock	0	0	11	24
13	Expiry of Film	Expiry of Film	0	76	5	0
14	Utilization of OT & SSCL	No. of patients surgery performed	81	1270	103	0
15	Off Hour Clinic Services	Patients attended during off hour clinic	25493	0	5220	0

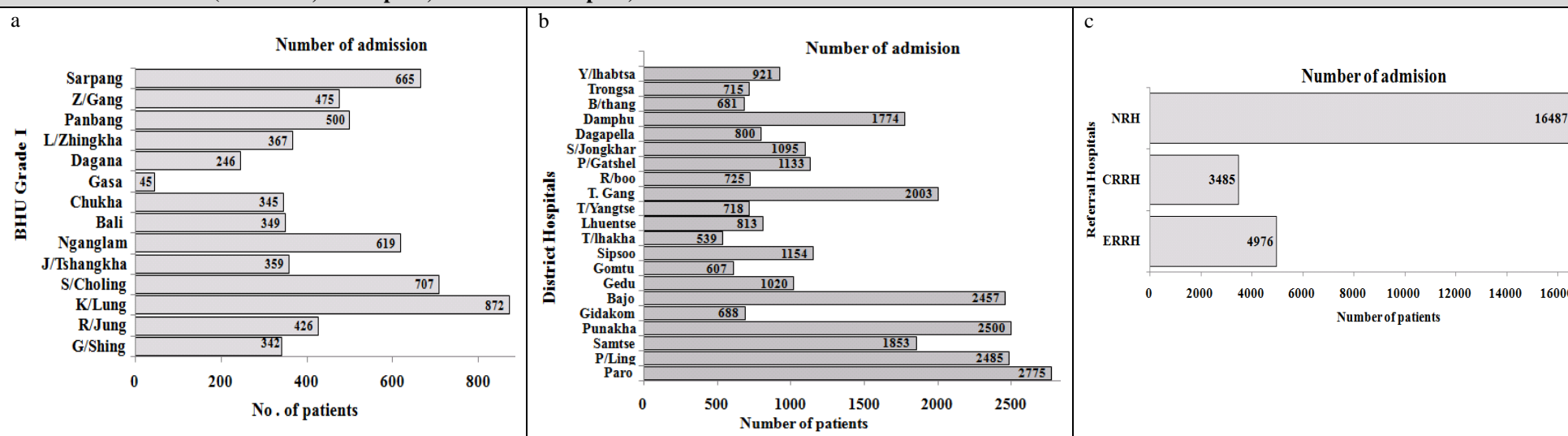
HAMT KPI baseline for three categories of Healthcare centres in average and percentage (%)

SI	KPIs	Matrices to be reported	National Referral Hospital Baseline	Regional Referral Hospital Baseline	District Hospital Baseline	BHU-1 Baseline
1	Bed Occupancy Rate (%)	Bed Occupancy Rate	77	65	56	40
2	Patient Discharge (%)	Patients discharged before 11 am	44	80	0	0
3	Average Length of Stay (days)	Average Length of Stay	6	5	5	6
4	Staff Unavailability (%)	Percentage unavailability	5	6	11	7
5	Emergency Response Time (min)	Average emergency response Time	10	11	8	6
6	OPD Waiting Time (min)	Average waiting Time	53	9	2	2
7	SSCL (%)	Surgical Safety Checklist	40	2	0	0
8	Drugs bellow reorder level (%)	% drugs bellow reorder level	0	15	2	2
9	Infection Control System (%)	Infection Control System and waste management	81	82	79	73
10	Utilization of SSCL (%)	Percentage utilization of SSCL	40	81	0	0

8. Performance report of selected KPIs in Graphical Presentation

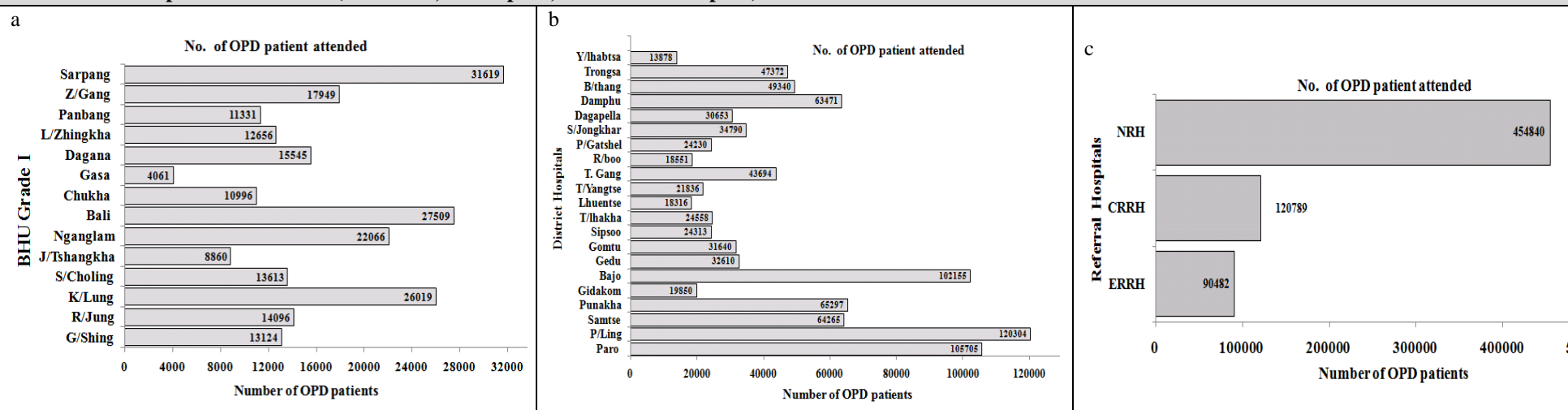
Performance report of selected KPIs displayed according to the level of healthcare centres

8.1. No. of admission (a=BHU-I; b=Hospital; c = Referral hospital)



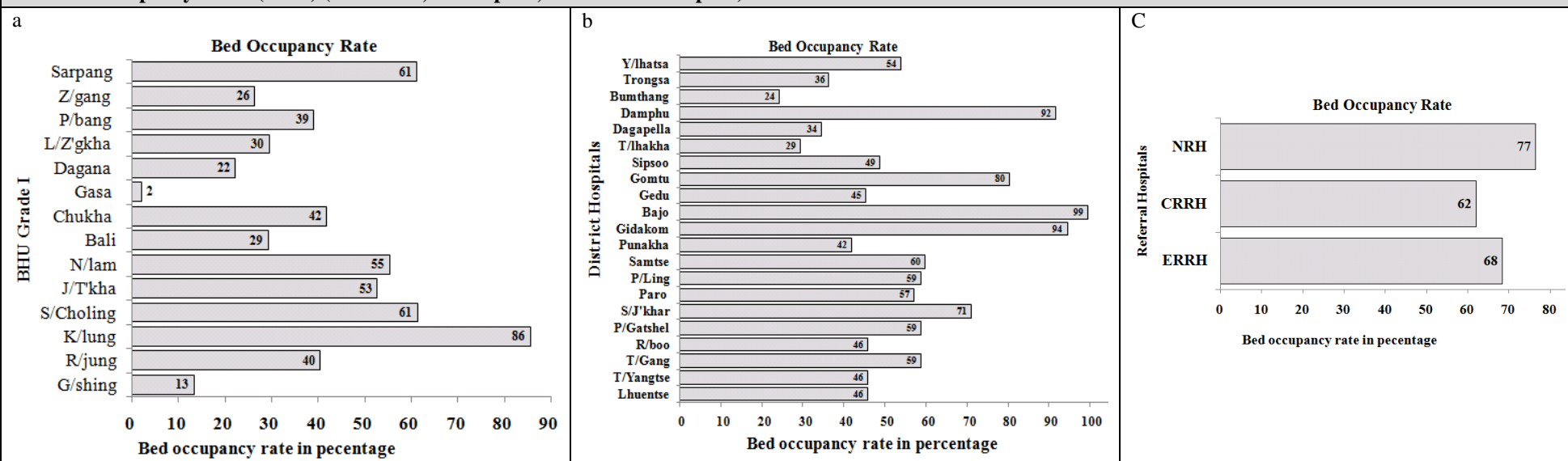
In the above figure, among BHU-I, Kanglung reported the highest number of admission and Gasa the lowest; b) among the hospitals, Paro reported the highest number of admission and T/Lhakha the lowest; c) NRRH reported the highest number of admission as expected.

8.2. No. of OPD patients attended (a=BHU-I; b=Hospital; c = Referral hospital)



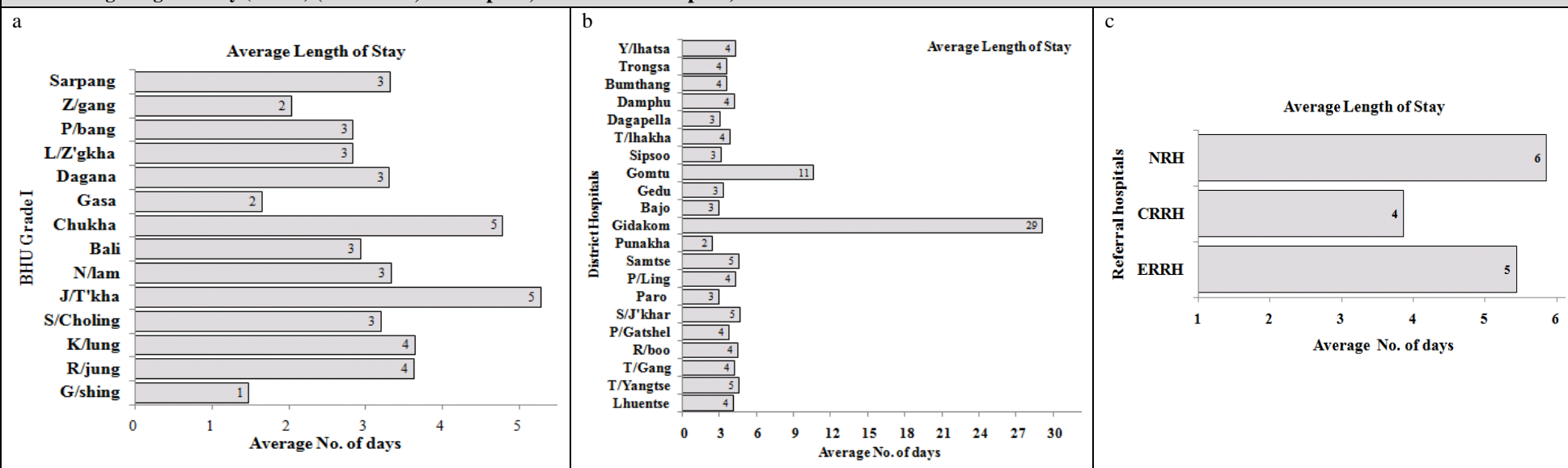
In the above figure, among BHU-I, a) the Sarpang attended the highest total OPD patients and the lowest by Gasa; b) Among the hospitals, P/Ling attended the highest OPD patients and lowest by the Yebilhatsa; c) As expected, NRRH attended the highest total number of OPD patients and lowest by CRRH among the referral hospitals.

8.3. Bed Occupancy Rates (BOR) (a=BHU-I; b=Hospital; c = Referral hospital)



In the above figure, among BHU-I, **Kanglung** reported the highest BOR and Gasa the lowest; b) among the hospitals, Damphu reported the highest BOR and Bumthang the lowest; c) Among the referral hospitals, JDWRH has the highest BOR as expected.

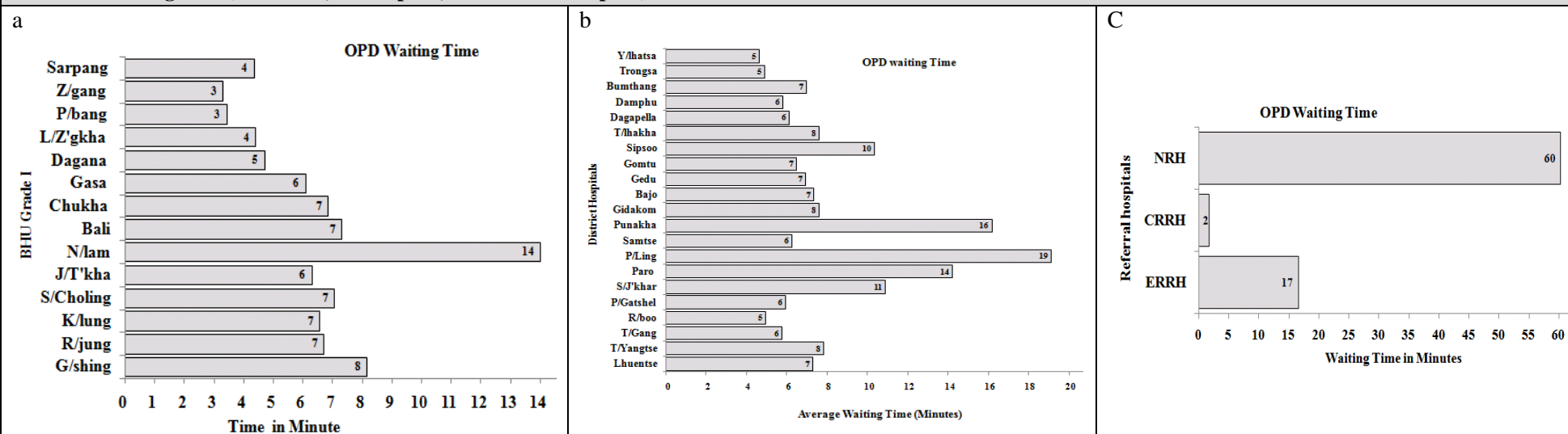
8.4. Average length of stay (ALOS) (a=BHU-I; b=Hospital; c = Referral hospital)



In the above figure, among BHU-I, a) J/T'kha and Chukha reported the highest average length of stay and the Gasa the lowest; (b) Among the hospitals, Gidakom reported the highest ALOS (TB positive & MDR patients) and three hospitals the lowest as shown in the figure; c) Among the referral hospitals, ERRH reported the highest ALOS and JDWRH the lowest.

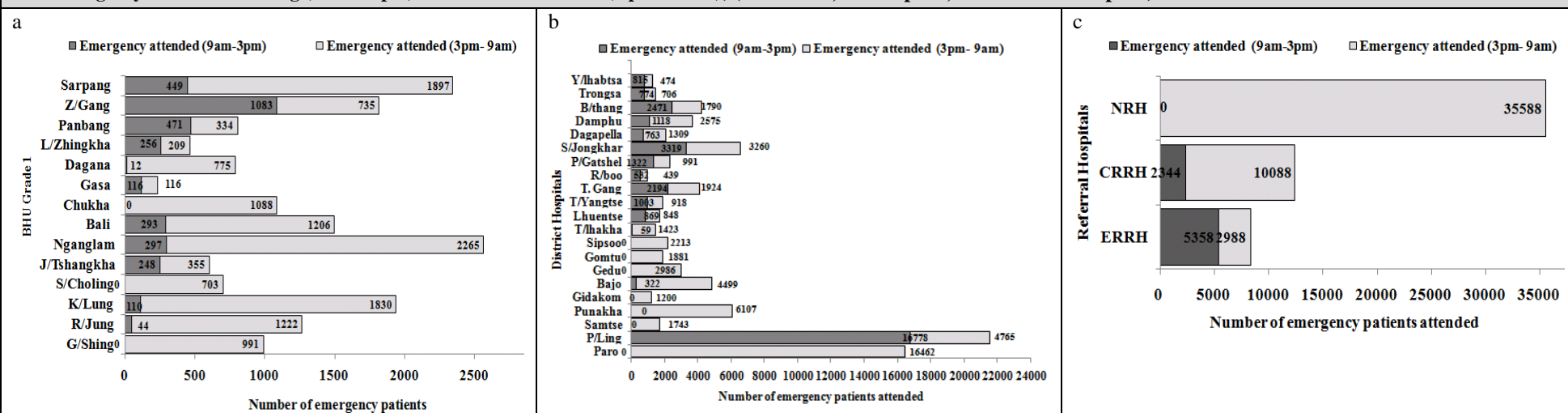
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8.5. OPD Waiting time (a=BHU-I; b=Hospital; c = Referral hospital)



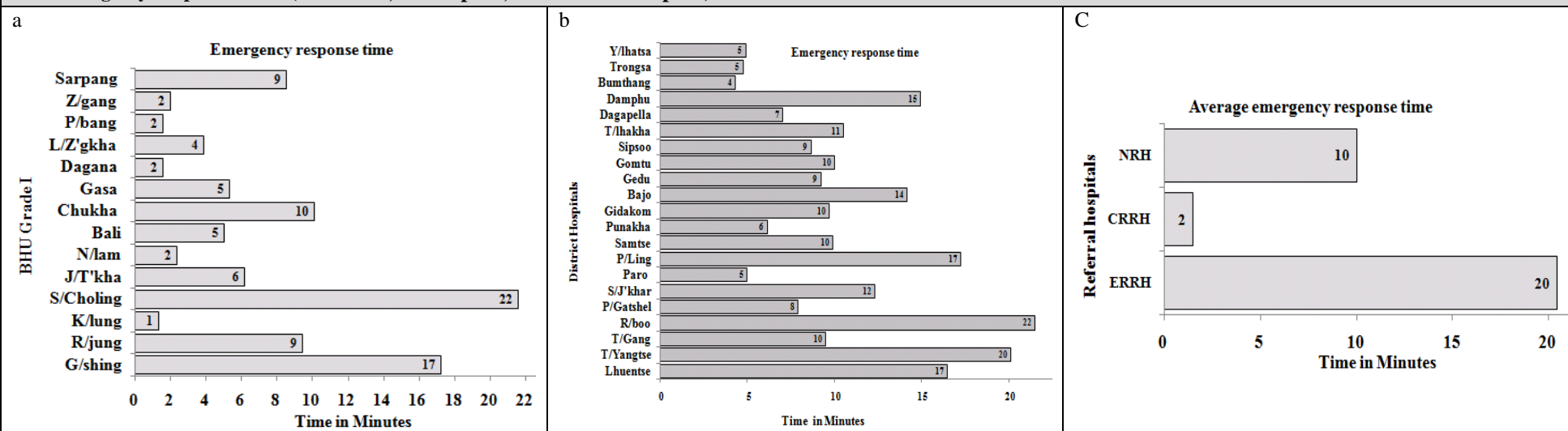
In the above figure, among BHU-I, Nganglam reported the highest OPD waiting time and two hospitals the lowest; b) Among the hospitals, P/ling reported the highest OPD waiting time and two hospitals have not reported; (c) Among the referral hospitals, NRRH reported the highest waiting time the CRRH the lowest.

8.6. Emergency attendance during (9am – 3 pm) and after office hours (3 pm – 9 am); (a=BHU-I; b=Hospital; c = Referral hospital)



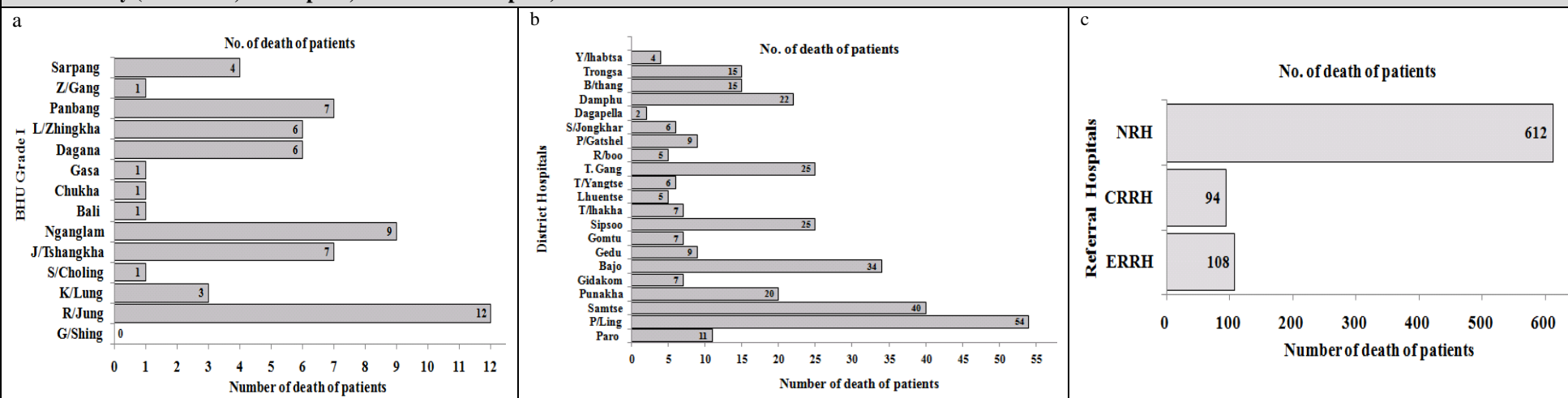
In the above figure, among BHU-I staff, Nganglam, has attended highest emergency after the office hours and Zhemgang report the highest within office hours; b) Among the hospitals, Paro Hospital has attended highest emergency duty after office hours and Yebilhabtsa the lowest; P/Ling hospital has attended highest within office hours and lowest by Bajo hospital. (c) The NRRH attend s the highest emergency cases after office hours and ERRH attends highest emergency during officers.

8.7. Emergency Response Time (a=BHU-I; b=Hospital; c = Referral hospital)



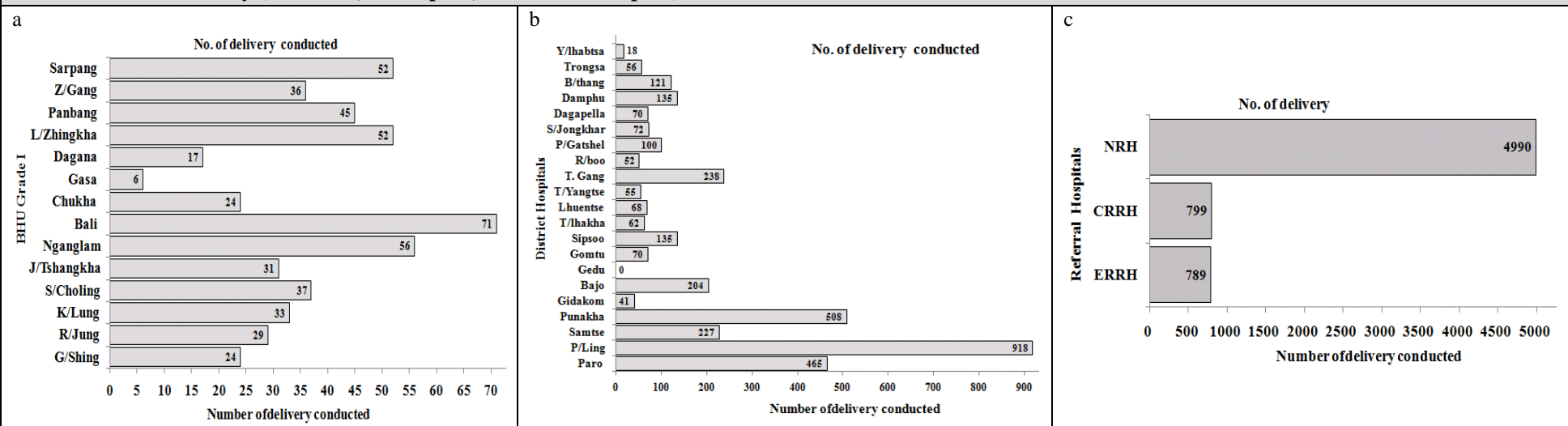
In the above figure, among BHU-I, S/Choling BHU-I reported the longest emergency response time and Kanglung the shortest; b) Among the hospitals, Riserboo hospital reported the longest emergency response time and Bumthang the shortest. (c) Among the referral hospitals, ERRH reported the longest emergency response time and the CRRH the shortest.

8.8. Mortality (a=BHU-I; b=Hospital; c = Referral hospital)



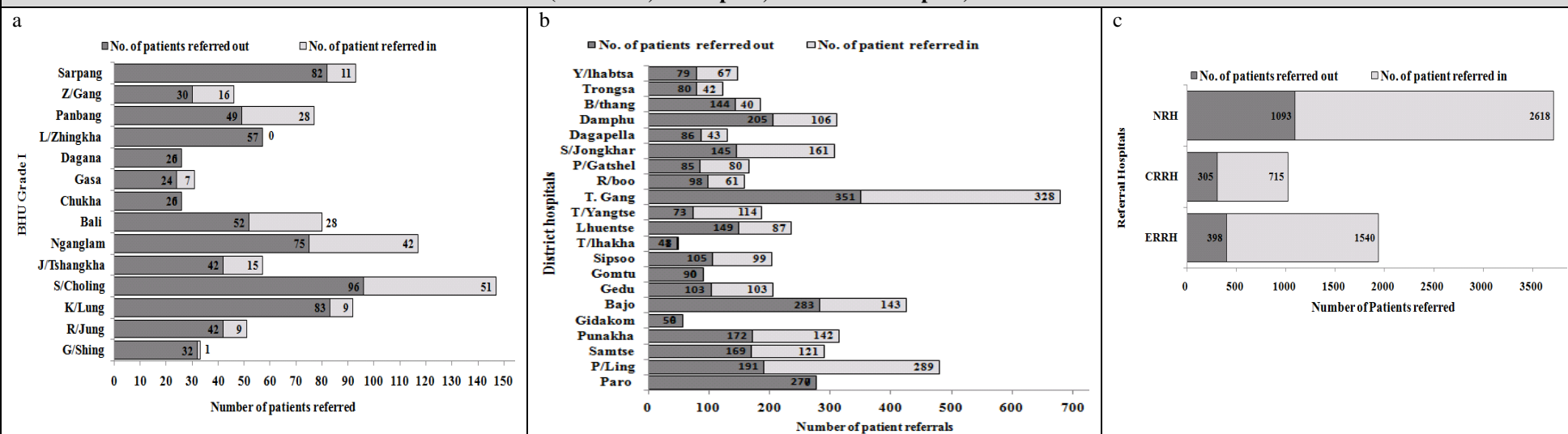
In the above figure, among BHU-I, Rangjung reported the highest number of death and five BHU-I the lowest as shown in the figure; (b) Among the hospitals; P/Ling reported the highest number of death and Dagapella the lowest. (c) Among the Referral Hospitals, NRRH reported the highest number of death and CRRH the lowest.

8.9. Institutional Delivery (a=BHU-I; b=Hospital; c = Referral hospital)



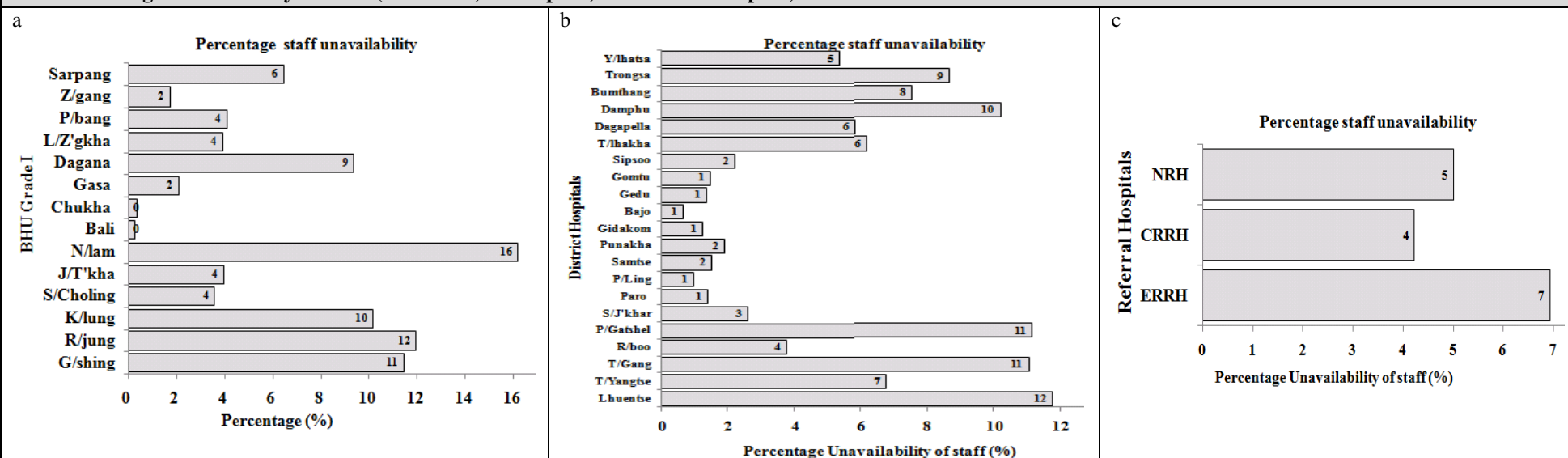
In the above figure, among BHU-I, Bali BHU-I conducted the highest number of delivery and Gasa the lowest; b) Among the hospitals, P/Ling Hospital has conducted the highest number of delivery and Y/Lhabtsa the lowest; c) Among the referral hospitals, NRRH has conducted the highest total number of delivery and the lowest by ERRH.

8.10. Patient referrals out and into the healthcare centres (a=BHU-I; b=Hospital; c = Referral hospital)



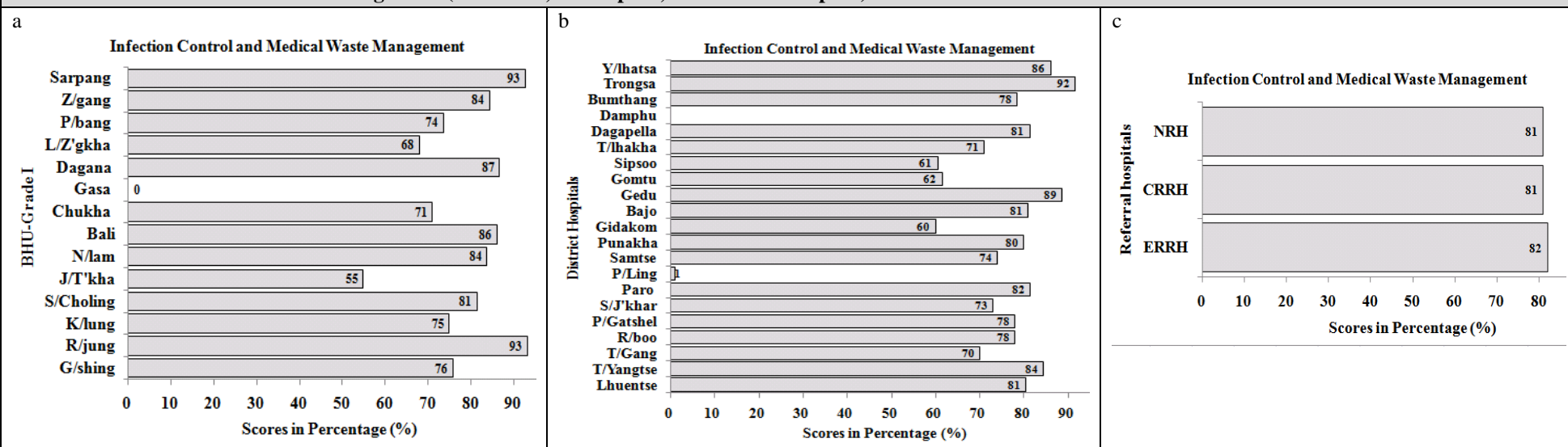
In the above figure, among BHU-I, S/Choling reported the highest referral out and into the BHU-I and Gasa reported the lowest referral out and Gyelposhing reported lowest referral in; b) Trashhi Gang reported the highest referral in and into the hospital; c) NRRH reported the highest referral out and into the hospital.

8.11. Percentage unavailability of staff (a=BHU-I; b=Hospital; c = Referral hospital)



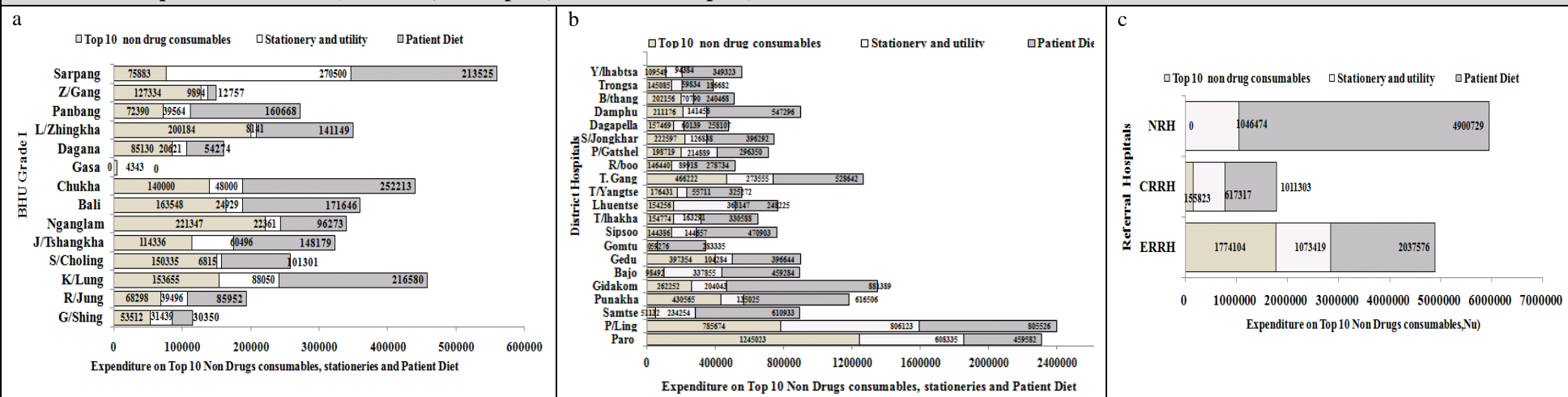
In the above figure, among BHU-I, Nganglam reported the highest % unavailability of staff and Chukha and Bali the lowest; (b) Among the hospitals, Lhuentse hospital reported the highest and six hospitals the lowest as shown in the figure; (c) ERRH reported the highest staff unavailability and other two referral hospitals have almost the same.

8.12. Infection control and waste management (a=BHU-I; b=Hospital; c = Referral hospital)



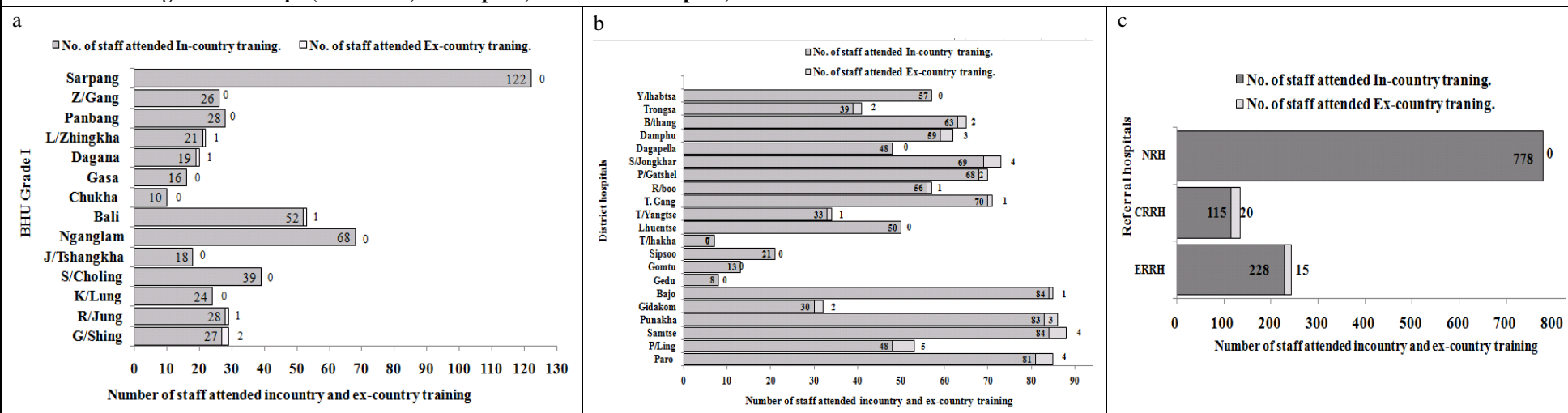
In the above figure, among BHU-I, Sarpang and Rangjung has scored the highest in Infection control and waste management and Jomotshangkha the lowest. However, 5 BHU-I has not reported. b) Among the hospitals, Trongsa has scored the highest and Sipsoo the lowest, but two hospitals have not reported; (c) MRRH has scored the highest among the referral hospitals and NRH & CRRH the lowest.

8.13. Cost for top ten consumables (a=BHU-I; b=Hospital; c = Referral hospital)



In the above figure, among BHU-I, Nganglam BHU-I has spent the highest for Top 10 non drugs, Sarpang for stationery and utility and Chukha BHU-I for patient diet; b) Among the hospitals, Paro has spent the highest for top 10 nondrug consumables, P/Ling for stationeries & utility; Gidakom for patient diet. Among the referral hospitals, ERRH has spent the highest for stationeries and utility; NRH spent highest for patient diet has not report for top 10 consumables.

8.14. Staff training and workshop (a=BHU-I; b=Hospital; c = Referral hospital)



In the above figure, among BHU-I staff, Sarpang has attended the highest in-country training and Chukha the lowest; staff of 9 BHU-I has not attended any ex-country training in 2015; b) the staff of Wangdi and Samtse attended the highest in-country training and workshop whereas Gedu and T/Lakha hospital staff obtained the lowest opportunity for in-country training/workshop. One of the hospitals has not attended any ex-country training in 2014; c) The staff of NRH attended the highest in country training but JDWNRH has not reported for ex-country training.

9. Constraint of HAMT Program

HAMT program encountered constraints for sustainability due to some problems as highlighted below:

Inconsistent reporting by the healthcare; lack of cooperation from the healthcare centre staff to the HAMT members, ignorance of the importance of HAMT activities by the various healthcare centres, inadequate knowledge of HAMT members for statistical analysis of the HAMT data and compilation of reports are the major challenges of the HAMT program.

10. Way Forward

QASD is doing the best to address the constraints of HAMT program and improvement plan has been already made to sustain and strengthen HAMT program as follows: i) Organizational design; ii) Performance management system (PMS), and iii) Nation-wide roll-out initiation plan, vi) Coordination meeting and training of HAMT members and regional cluster focal persons.

10.1. Organizational Design

As QASD is already working on improvement of all the healthcare centres, it is relatively easy to extend its mandate to include HAMT activities across all levels of healthcare centres in a more holistic manner. Manpower in QASD for HAMT program and regional cluster focal persons would be strengthened by recruiting only relevant and qualified professionals capable of contributing towards holistic transformation management and improvement of healthcare services in Bhutan.

10.2. Performance Management of HAMT

Performance management is very critical to success of HAMT activities. A successful performance management requires setting up of the following 3 components:

- i) Periodic HAMT review meeting with staff of healthcare centres.
- ii) Regular assessment of healthcare centre's performance using standard checklist.
- iii) Efficient system of reporting the HAMT KPIs from the health centres

10.3. Nation-wide Roll-out Initiation Plan

HAMT program already having rolled out to the hospitals and BHU-Is, and gradually reaching to BHU-IIIs, the larger part of the success of the implementation would depend on the expertise and contribution of the HAMT members and regional cluster focal persons. QASD has already planned to commence the rollout of HAMT activities to all the remaining BHU-IIIs in phases marking the nationwide HAMT activities implementation.

11. References

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12. Annexure 1: Definition of Key Performance Indicators

SI	KPIs	KPI Code	Metrics to be reported	Definition	Quality Dimension	Unit
Inpatient Department						
1	Inpatient Days	RH/KPI-1	No. of inpatient days	Number of days a patient occupy a bed for at least one day (admitted and discharged on the same day and/or admitted one day and discharged the next).	Efficiency and patient centeredness	Days
2	Bed Occupancy Rate (%)	RH/KPI-2	Bed Occupancy Rate	Measure of healthcare center's efficiency (calculated as total hospital bed days/[bed size of a hospital x days of the month]x100).	Efficiency, patient centeredness and accessibility	Percent
3	Inpatient Admission	RH/KPI-3	No. of patients admitted	The formal acceptance of a patient by healthcare centre who is to be provided with bed for continuous service.	Infrastructure & efficiency, patient centeredness	Number
4	Inpatient Discharge	RH/KPI-4	Total patients discharged	Release of a patient after recover, referral or death of an admitted patient from a healthcare centre.	Patient centeredness & efficiency	Number
7	Mortality	RH/KPI-7	Health Facility Mortality	Total number of death of a patient that occurred at the healthcare centre.	Patient centeredness & patient safety	Number
8	Institutional Delivery	RH/KPI-8	No. of delivery conducted	Total number of delivery conducted in the healthcare centre.	Patient safety & patient centeredness	Number
9	Neonatal Death	RH/KPI-9	No. of neonatal deaths	Number of neonatal deaths occurred in the healthcare centre within 28 days.	Patient centeredness and patient safety	Number
10	Maternal Death	RH/KPI-10	No. of maternal deaths	The death of a woman while pregnant or within 42 days after termination of pregnancy, irrespective of duration and the site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management, but not from accidental or incidental causes.	Patient centeredness and patient safety	Number
11	Patient under observation	RH/KPI-11	Patient under observation	Number of patients occupying bed and availing healthcare services for maximum of 23 hours in the healthcare centre but not admitted.	patient centeredness	Number
Outpatient Department						
12	Outpatient Attendance	RH/KPI-12	No. of OPD patient attended	Total number of OPD patient attended by the clinical staff of the healthcare centre.	Accessibility and patient centeredness	Number
13	Waiting Time	RH/KPI-13(a)	Medical	Time taken by patient from reception counter exit till examination by a health professional in the chamber.	Accessibility and patient centeredness	Minutes
		RH/KPI-13(b)	Surgery			Minutes
		RH/KPI-13(c)	Gynecology			Minutes
		RH/KPI-13(d)	Orthopaedic			Minutes
		RH/KPI-13(e)	Dermatology			Minutes
		RH/KPI-13(f)	Psychiatric			Minutes
		RH/KPI-13(g)	Eye			Minutes
		RH/KPI-13(h)	ENT (Audiometry)			Minutes
		RH/KPI-13(i)	Pediatric			Minutes
		RH/KPI-13(j)	Dental			Minutes
		RH/KPI-23(k)	Traditional			Minutes
RH/KPI-13(l)	GDMO	Minutes				

		RH/KPI-23(m)	ACO			Minutes
		RH/KPI-13(n)	HA			Minutes
		RH/KPI-13(o)	X-Ray			Minutes
		RH/KPI-13(p)	Ultra-Sound			Minutes
		RH/KPI-23(q)	Laboratory			Minutes
		RH/KPI-13(r)	Pharmacy			Minutes
		RH/KPI-23(t)	Physiotherapy			Minutes
		RH/KPI-13(u)	MCH/CHU			Minutes
	Average		Average waiting time		Average waiting time	Minutes
Emergency Department						
15	Emergency Attendance (24X7)	RH/KPI-15(a)	Emergency attended during office hours (9am-3pm)	Number of emergency patients attended (24/7) at the casualty and ward of the healthcare centres.	Accessibility, patient centeredness and safety	Number
		RH/KPI-15(b)	Emergency attended after office hours (3pm- 9am)			Number
16	Emergency Response Time	RH/KPI-16	Average emergency response Time for consultation of emergency patients	Time gap between emergency patients's reporting to the healthcare centre and being examined by clinical staff at the healthcare centre.	Patient safety	Minutes
Referral Section						
17	Patient Referral	RH/KPI-17(a)	Total patient referred-in	Total number of patients referred out or into the healthcare centre for further treatment.	Availability and efficiency of services	Number
		RH/KPI-17(b)	Total patient referred-out			Number
18	Follow up of Referral Patients	RH/KPI-18(a)	Follow up of referred patient with feedback (In-country)	Percentage of patients being followed up with feedback after referral to higher healthcare centre within the country or outside the country.	Efficiency, effectiveness & patient centeredness	Number
		RH/KPI-18(b)	Percentage followed up	Number of feedbacks/total number of patients referred out of the Healthcare centres x 100)		Percentage
Pharmacy Department						
26	Drugs Reorder Levels (%)	RH/KPI-26(a)	No. of drugs supplied	List of drugs out stocks below an agreed minimum reorder level at the healthcare centre.	Efficiency	Number
		RH/KPI-26(b)	No. of drugs bellow minimum reorder level			Number
		RH/KPI-26(c)	Percentage drugs bellow minimum reorder level			Number of drugs which are below agreed minimum level/No of drugs supplied to health facilityx100).
Management of Healthcare Centre						
27	Staff Unavailability	RH/KPI-13(i)	Total Strength of the staff	Unavailability of staff in the healthcare centre due to leave and training (exclude maternity, paternity, bereavement, long term study up to 1 month, ORC visit, patient escort and school visits). Calculated as total number of unavailable days/ total working days all the staff x 100)	Efficiency, patient centeredness and accessibility	Number
		RH/KPI-13(ii)	Total no. of Clinical staff.			Number
		RH/KPI-13(iii)	No. of days staff was out of station			Days
		RH/KPI-13(iv)	Percentage unavailability			%
		RH/KPI-27(a)	Medical			Days
		RH/KPI-27(b)	Surgery			Days
		RH/KPI-27(c)	Gynecology			Days
		RH/KPI-27(d)	Orthopaedic			Days
RH/KPI-27(e)	Dermatology	Days				

		RH/KPI-27(f)	Psychiatric		Days
		RH/KPI-27(g)	Eye		Days
		RH/KPI-27(h)	ENT (Audiometry)		Days
		RH/KPI-27(i)	Pediatric		Days
		RH/KPI-27(j)	Dental		Days
		RH/KPI-27(k)	Traditional		Days
		RH/KPI-27(l)	HA		Days
		RH/KPI-27(m)	ACO		Days
		RH/KPI-27(n)	GDMO		Days
		RH/KPI-27(o)	Radiology		Days
		RH/KPI-27(p)	Laboratory		Days
		RH/KPI-27(q)	Pharmacy		Days
		RH/KPI-27(r)	Physiotherapy		Days
		RH/KPI-27(t)	Minor OT		Days
		RH/KPI-27(u)	MCH/RHU		Days
		RH/KPI-27(u)	TB/Leprosy Unit		Days
		RH/KPI-27(v)	HISC		Days
		RH/KPI-27(w)	ECG & Echo		Days
		RH/KPI-27(x)	Administrative staff		Days
		RH/KPI-27(y)	Maintenance		Days
	RH/KPI-27(z)	Housekeeping		Days	
28	Staff Utilization	RH/KPI-28(a)	Medical	Total number of patients attended by the specific unit, section, chamber and departments in a month.	Number
		RH/KPI-28(b)	Cardiologist		Number
		RH/KPI-28(c)	Surgery		Number
		RH/KPI-28(d)	Gynecology		Number
		RH/KPI-28(e)	Orthopaedic		Number
		RH/KPI-28(f)	Dermatology		Number
		RH/KPI-28(g)	Psychiatric		Number
		RH/KPI-28(h)	Eye		Number
		RH/KPI-28(i)	ENT (Audiometry)		Number
		RH/KPI-28(j)	Pediatric		Number
		RH/KPI-28(k)	Dental		Number
		RH/KPI-28(l)	Traditional		Number
		RH/KPI-28(m)	HA		Number
		RH/KPI-28(n)	ACO		Number
		RH/KPI-28(o)	GDMO		Number
		RH/KPI-28(p)	X-Ray		Number
		RH/KPI-28(q)	Ultra-sound		Number
		RH/KPI-28(r)	Laboratory		Number
RH/KPI-28(s)	Pharmacy	Number			
RH/KPI-28(t)	Physiotherapy	Number			
RH/KPI-28(u)	Minor OT	Number			
RH/KPI-28(v)	MCH/RHU	Number			
RH/KPI-28(w)	TB/Leprosy Unit	Number			
				Efficiency and technical performance	

		RH/KPI-28(x)	Malaria Unit			Number
		RH/KPI-28(v)	Dietician			Number
		RH/KPI-28(w)	Diabetic clinic			Number
		RH/KPI-28(x)	HISC			Number
		RH/KPI-28(y)	ECG & Echo			Number
		RH/KPI-28(z)	Endoscopic unit			Number
29	Infection Control & Medical Waste Management & 5S-CQI (%)	RH/KPI-29	Infection Control and Medical Waste Management	Assessment of healthcare centres by evaluating various activities of Infection Control and medical waste management using a standard checklist (HHICA)	Patient safety and work efficiency	Percent
30	Training/Workshop (In & Ex-Country)	RH/KPI-30 (a)	No. of staff attended In-country training.	Total number of trainings received including both ex-country and In-country (training, workshop and attachment) by the staff of the healthcare centre.	Efficiency	Number
		RH/KPI-30(b)	No. of staff attended Ex-country training.			Number
31	Expenditure	RH/KPI-31(a)	Top 10 non drug consumables	Total expenditure incurred for top 10 non drug consumables; stationeries & utility and patient diets at the healthcare centres.	Efficiency & patient centeredness	Ngultrum
		RH/KPI-31(b)	Stationery and utility			Ngultrum
		RH/KPI-31(c)	Patient Diet			Ngultrum