

UNDERSTANDING WATER, SANITATION & HYGIENE IN HEALTH CARE FACILITIES

Status in Hospitals of Bhutan



Public Health Engineering Division
Department of Public Health
Ministry of Health
Kawajangsa : Thimphu



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FOREWORD

An urgent need to understand the status of water, sanitation and hygiene (WASH) in health care facilities (HCF) in Bhutan is the key theme of this report. Till date there is no comprehensive data available to know the extent to which HCFs in Bhutan are providing WASH services and facilities.

Beginning in 2008, Public Health Engineering Division (PHED) of Department of Public Health (DoPH), Ministry of Health (MoH) in Bhutan initiated the Rural Sanitation and Hygiene Program (RSAHP) aiming for access to improved WASH along with other programs such as School WASH and Religion & Health Project (RHP). However these programs do not account for WASH in HCFs. Hence, PHED conducted a pilot survey study in 2015 to understand the status of WASH in HCFs. The study covered 22 out of 23 BHUs in Mongar, 4 out of 10 BHUs in Samdrup Jongkhar and 9 out of 14 BHUs in Samtse. The pilot study did not cover all the HCFs in Bhutan.

Following the pilot survey study, PHED embarked on the current study as the next phase in understanding the status of WASH services and facilities in HCFs of Bhutan whereby all the that is designated as district hospitals including the regional and national referral hospitals are surveyed.

Findings from this study is expected to provide baseline information for any future intervention targeting WASH in HCF. Furthermore, it is envisaged that various elements for improving WASH in HCFs will be brought to the attention of program officials, facility designers and policy makers alike. This study report will also be helpful for reference when the next phase of such study is conducted.

Chief Engineer
Public Health Engineering Division

MAP OF BHUTAN : Health Infrastructure

Map of Bhutan

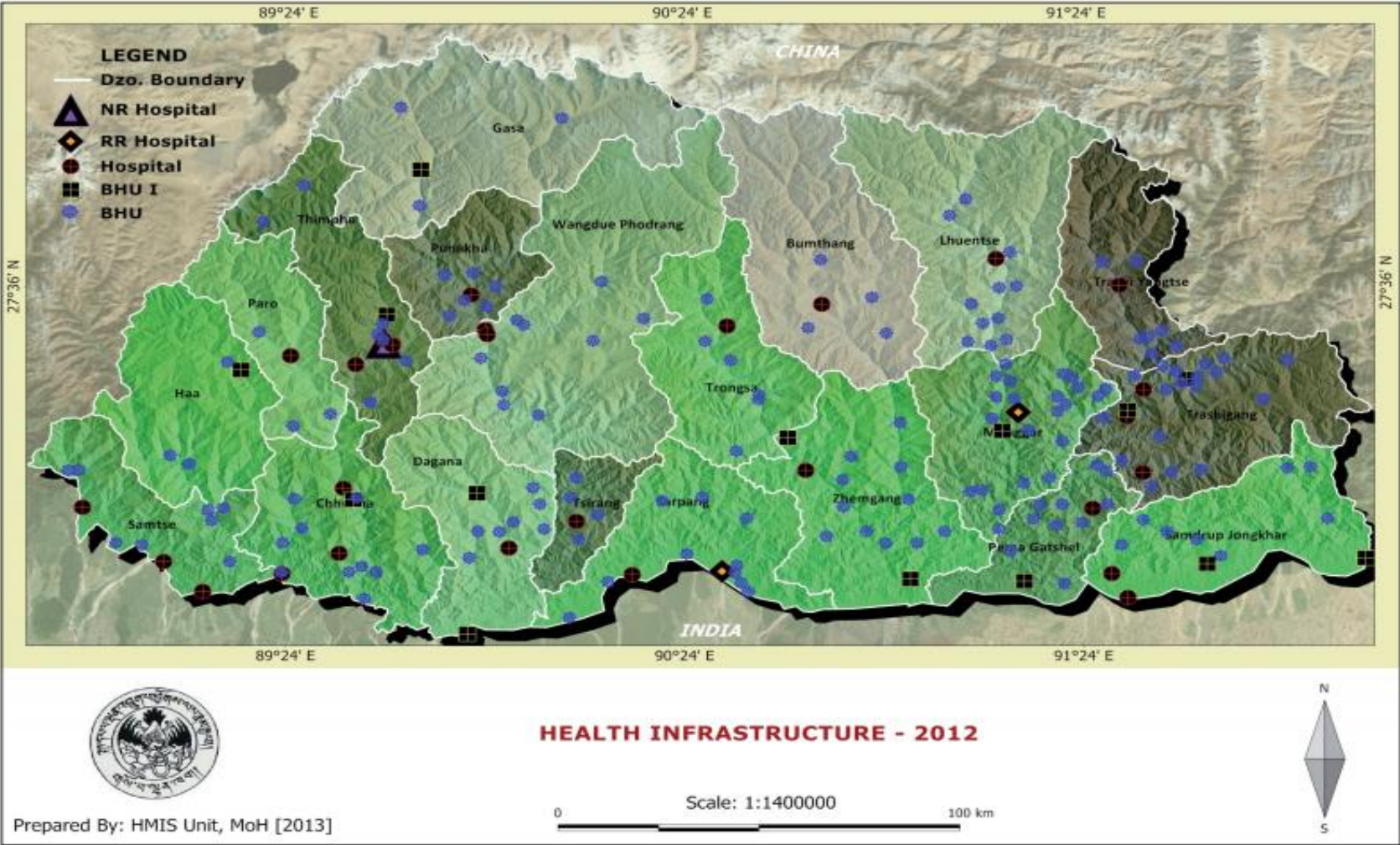


TABLE 1: LIST OF HEALTH INFRASTRUCTURE

District	Facility Type					ORC with shed	ORC without shed
	Hospital	BHU I	BHU II	Sub-post	Ind. Unit		
Bumthang	1	0	5	0	3	12	0
Chhukha	3	2	12	1	4	38	6
Dagana	1	2	7	0	3	30	2
Gasa	0	1	3	0	1	5	1
Haa	1	1	4	0	1	8	9
Lhuentse	1	0	14	0	2	31	1
Monggar	1	1	22	5	4	53	0
Paro	1	0	3	0	1	17	5
Pemagatshel	1	1	11	7	4	34	5
Punakha	1	0	7	1	1	11	0
Samdrup Jongkhar	2	3	7	0	5	28	4
Samtse	2	1	13	0	3	45	4
Sarpang	2	1	11	1	2	12	1
Thimphu	*5	1	**12	0	2	5	13
Trashigang	3	5	14	4	5	55	1
Trashiyangtse	1	1	7	2	2	21	2
Trongsa	1	0	6	3	3	21	0
Tsirang	1	0	7	0	1	14	5
Wangdue Phodrang	2	1	8	2	3	24	5
Zhemgang	1	2	11	2	4	30	4
Total	31	23	184	28	54	494	68

Note :

1. INTRODUCTION

An urgent need to understand the status of water, sanitation and hygiene (WASH) in health care facilities (HCF) in Bhutan is the key theme of this report. Till date there is no comprehensive data available to know the extent to which HCFs in Bhutan are providing WASH services and facilities.

Beginning in 2008, Public Health Engineering Division (PHED) of Department of Public Health (DoPH), Ministry of Health (MoH) in Bhutan initiated the Rural Sanitation and Hygiene Program (RSAHP) aiming for access to improved WASH along with other programs such as School WASH and Religion & Health Program (RHP). However these programs do not account for WASH in HCFs. Hence, PHED conducted a pilot survey study in 2015 to understand the status of WASH in HCFs. The study covered 22 out of 23 BHUs in Mongar, 4 out of 10 BHUs in Samdrup Jongkhar and 9 out of 14 BHUs in Samtse. The pilot study did not cover all the HCFs in Bhutan.

Following the pilot survey study, PHED embarked on the current study as the next phase in understanding the status of WASH services and facilities in HCFs of Bhutan whereby all the district hospitals are surveyed.

Findings from this study is expected to provide baseline information for any future intervention targeting WASH in HCF. Furthermore, it is envisaged that various elements for improving WASH in HCFs will be brought to the attention of program officials, facility designers and policy makers alike. This study report will also be helpful for reference when the next phase of such study is conducted that will include all the health facilities at the communities.

2. OBJECTIVES

- To understand the status of WASH in Hospitals of Bhutan;
- To strengthen understanding of WASH in HCF as a follow up on the pilot study conducted in BHUs of three districts: Mongar; Samdrup Jongkhar; and Samtse;
- To discuss way forward and interventions for improving WASH in HCFs;

3. METHOD

3.1 Study Design

A cross-sectional study of all hospitals of Bhutan including BHU I of Gasa and Haa Districts that serve as District hospital.

3.2 Study Setting

Healthcare services in Bhutan are delivered through a three-tiered healthcare system. Bhutan has 31 hospitals (including one indigenous hospital at Thimphu), 235 Basic Health Units and Sub-post, and 562 Outreach clinics (Ref AHB 2016).

For this study, the questionnaire used for the pilot study conducted by PHED in three Districts in April 2015 was used after amendment. The data from four hospitals (Punakha Hospital, Bajo Hospital, JDWNRH and Paro Hospital) were collected by the Programme and the data from other hospitals were self reported by the hospital themselves using the structured questionnaire (Annex 5) provided by the Programme.

3.3 Exclusion Criteria

Lungtenphu RBA Hospital, Tencholing RBA Hospital, Yonphula RBA Hospital, IMTRAT Hospital of Haa, India-Bhutan Friendship Hospital of Thimphu, and National Traditional Hospital were excluded from the study. Basic Health Units and Sub-Posts excluding BHU Grade I of Gasa and Haa Districts have not been covered under this study.

3.4 Data Analysis

The data was double entered in EpiData software and the analysis was conducted using SPSS software.

4. VARIABLES

4.1 Water Quantity

In 42.9% of the hospitals surveyed there is no sufficient water supply for daily needs with 24 hours back up supply (Table 1). The reasons for insufficient water supply are:

- i. Drying up of old water source (new source has been identified and yet to begin construction)
- ii. Frequent disruption at source
- iii. Hospital water supply line is shared with the municipality
- iv. Insufficient reservoir capacity
- v. Water is shared with neighbor
- vi. Problem from main supplier
- vii. No designated water reservoir

Table 2: Water sufficiency, severe shortage of water, and water storage tank in the hospitals of Bhutan, 2016		
Variable	No of Health facilities	Percent
No. of health facilities without sufficient water for daily needs in the facility (with 24 hours back up supply)	12	42.9
No. of health facility which have a severe shortage or lack of water routinely every year	11	39.3
No. of health facility which have separate water storage tank	23	82.1
Total No. of hospitals included in the study	28	100

Of all the hospitals surveyed, 39.3% faces severe shortage or lack of water on a routinely basis every year. While six of them face the problem during rainy season due to heavy rain that causes blockage of water pipes and landslides, four facilities face the problem during dry season due to drying up of water sources.

In the last 12 months 71.4% of the hospitals reported of water supply interruption for more than 2 hours at a time. In Samtse District Hospital the water supply was interrupted for 52 times over the same period. Pemagatshel District Hospital reported interruption for 24 times. Phuentsholing Hospital reported interruption for 10 times. 23 hospitals have separate water storage tank (Table 3).

Table 3: Frequency of water supply interruption during the past 12 months in the hospitals of Bhutan, 2016				
Frequency of water supply interruption	No. of health facilities	Percent	Valid Percent	Cumulative Percent
1	1	3.6	5	5
2	3	10.7	15	20
3	8	28.6	40	60
4	1	3.6	5	65
5	1	3.6	5	70
6	3	10.7	15	85
10	1	3.6	5	90
24	1	3.6	5	95
52	1	3.6	5	100
System Missing	8	28.6		
Total	28	100		

4.2 Water Quality

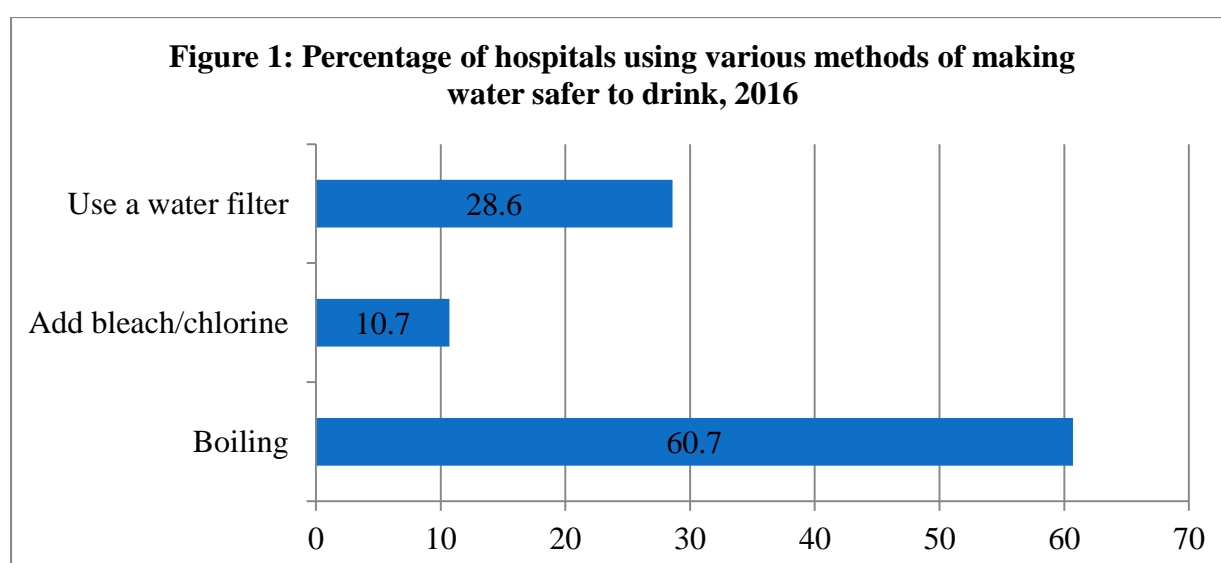
The main source of water for 18 hospitals is surface water such as rivers and streams. While eight hospitals reported protected spring as their main water source, two hospitals have protected well as their main source of water (Table 4).

Table 4: The main source of water for the hospitals of Bhutan, 2016		
Main source of water	No. of health facilities	Percent
Protected Spring	8	28.6
Surface Water (river, stream, pond, dam, lake, irrigation, channel, canal)	18	64.3
Protected well	2	7.1
Total No. of health facilities included in the study	28	100

Water is chlorinated at source in 17 of the hospitals while it is not in 9 (Table 5).

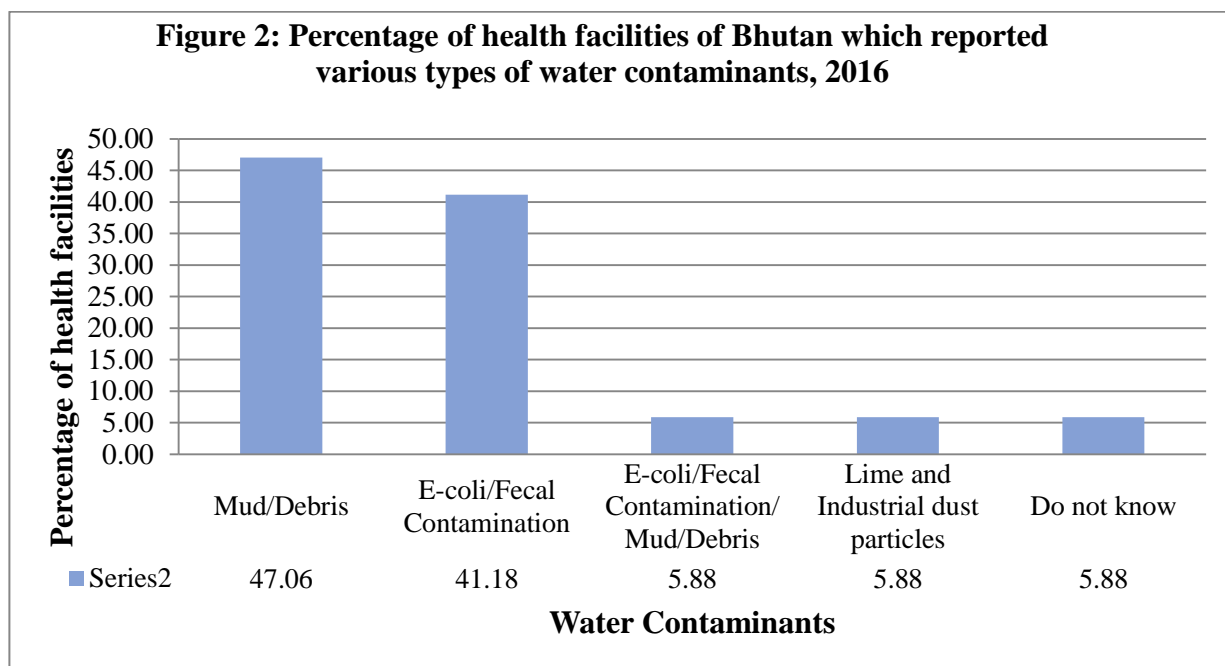
Water Chlorination	No. of Health Facilities	Percent	Valid Percent	Cumulative Percent
Un-chlorinated	9	32.1	33.3	33.3
Chlorinated	17	60.7	63	96.3
Don't know	1	3.6	3.7	100
System Missing	1	3.6		
Total	28	100		

According to the survey all the hospitals treat their water before drinking by boiling (60.7%), filtering (28.6%) and adding bleach/ chlorine (10.7%) (Figure 1).



Of the total hospitals surveyed, 17 experiences water turbidity (cloudy). On an average, these 17 hospitals face water turbidity on an average of 2.44 days in a month (SD: 0.96).

The most common water contaminants reported by the hospitals are mud/ debris and E-coli/ fecal coli form (Figure 2).



4.3 Water Points

The average number of water point users in a day is 265.61 (SD: 346.915) with maximum number of users being 1800 and the minimum being 12 (Table 6).

	N	Minimum	Maximum	Mean	Std. Deviation
No. of water point users in a day	28	12	1800	265.61	346.915

Out of 2304 water points across the hospitals 2302 are functional (Table 7).

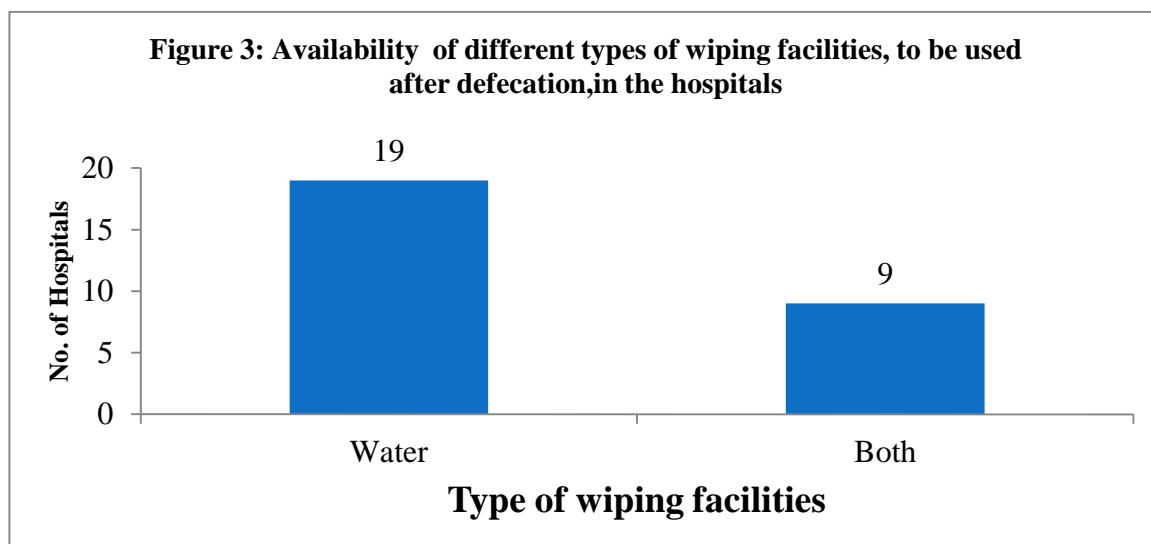
	N	Minimum	Maximum	Mean	Std. Deviation
No. of water point	28	3	2304	119.6	429.2
Total no. of functional water points	27	1	2304	116.7	438.2

4.4 Sanitation Access

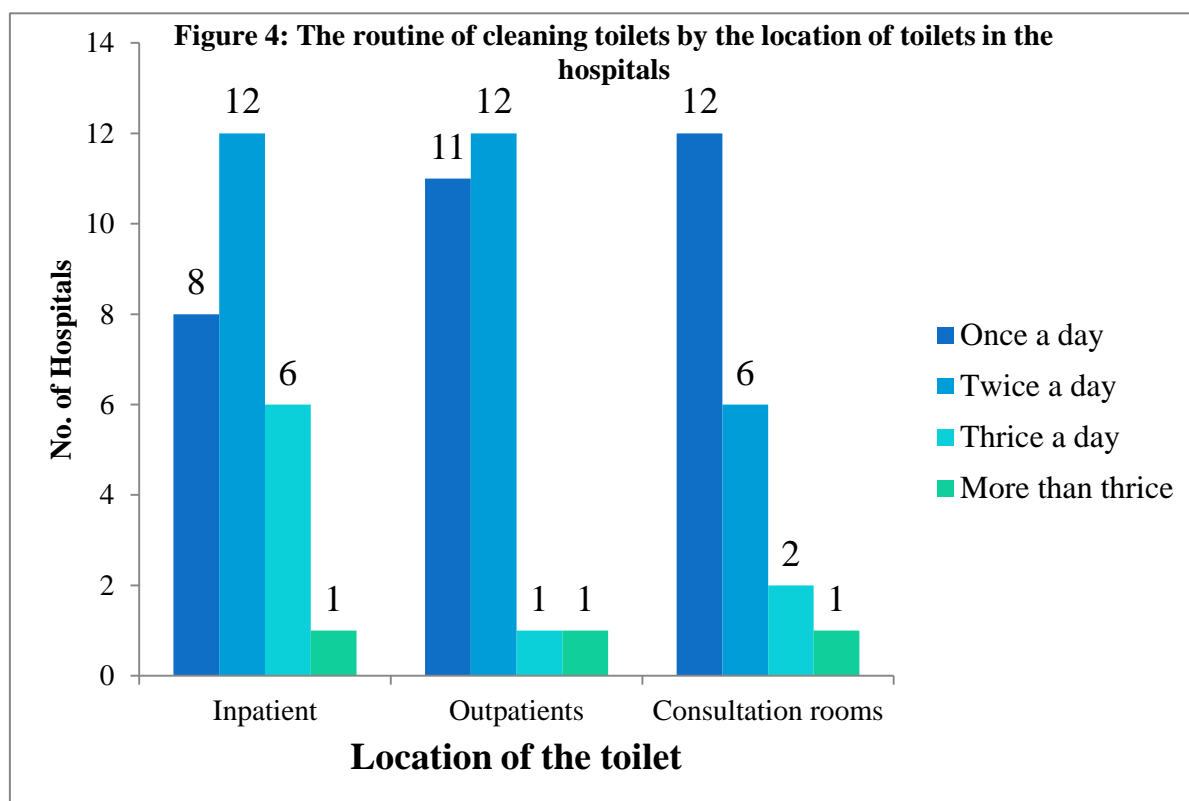
The average number of toilet facility per hospital is 28 (SD: 40) with maximum being 197 and minimum being 2 (Table 8).

Table 8: Toilet facilities and non-functional toilet facilities in Hospitals of Bhutan, 2016	
Variables	Total no. of toilet facilities
Total European type Toilet Facilities	303
Total Indian type Toilet Facilities	382
Total Urinal Pan facility	101
Total Toilet Facilities irrespective of type including Urinal Pan	786
Total Toilet Facilities Not Functioning including Urinal Pan	39
Mean no. of toilet per facility	28.07
	(SD 40.47; Max 197; Min 2)
Mean no. of non-functional toilet facilities per facility	1.39
	(SD 2.33; Max 12; Min 0)

Out of 786 toilet facilities including urinal pans 39 were dysfunctional. 19 hospitals reported of water being available for wiping after defecation and 9 reported both water and toilet paper being available (Figure 3)

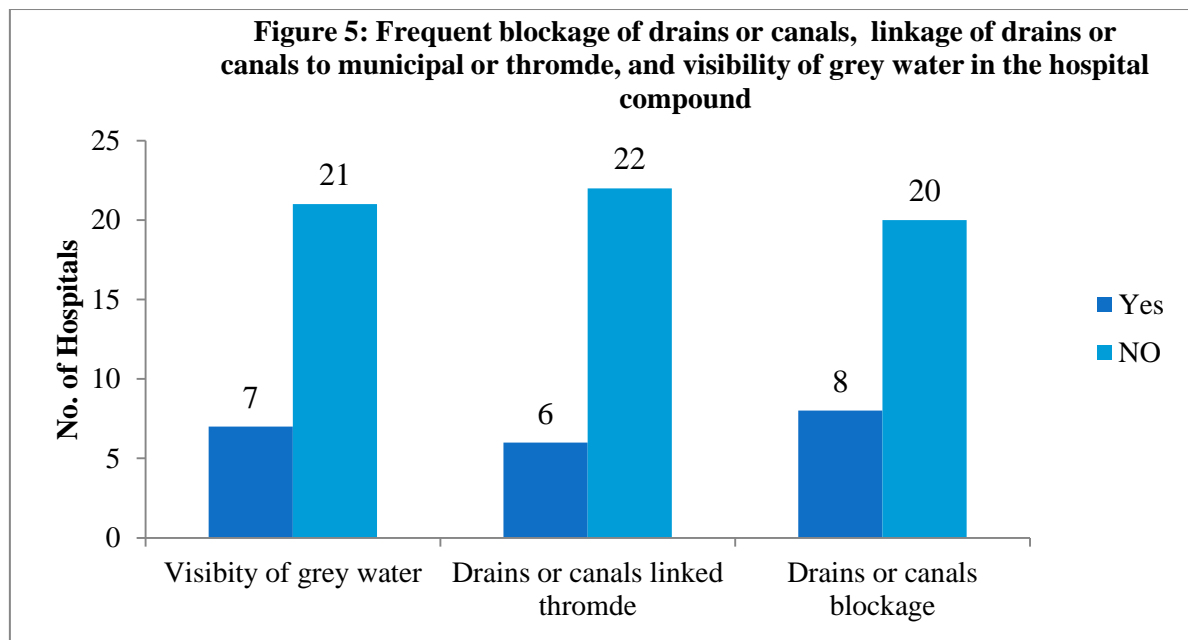


Most of the toilets are cleaned regularly i.e., once a day or twice a day commonly (Figure 4)



4.5 Drainage

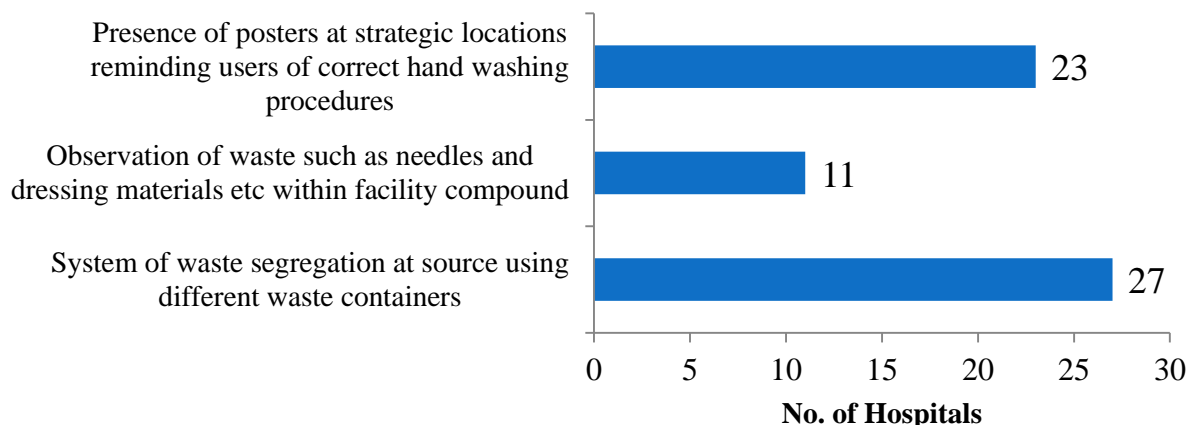
- Grey water is visible in 7 hospital surroundings.
- 6 hospitals' drainage/ canals are linked to municipal or thromde.
- 8 hospitals reported of frequent drain/canal blockage within the compound (Figure 5)



4.6 Waste Management

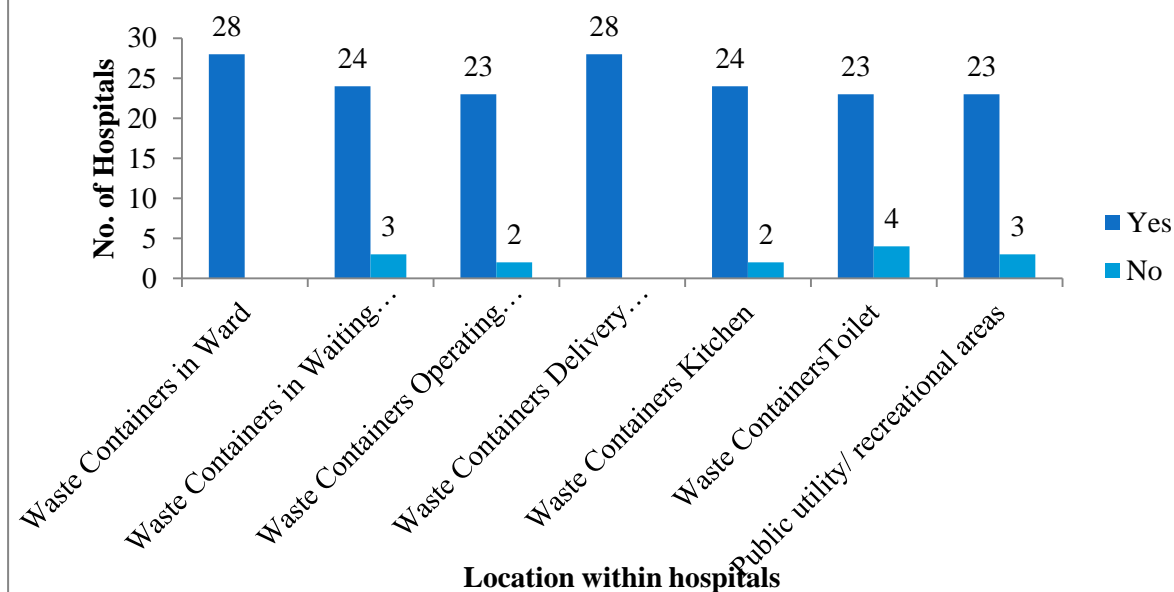
27 hospitals claimed to have a system of waste segregation at source by providing separate waste containers for infectious wastes, non-infectious wastes and sharps. It was also found that health care wastes such as needles and dressing materials were not observed within the hospital compound (Figure 6).

Figure 6: Observation of waste within facility compound and posters at strategic locations in the hospitals and waste segregation system

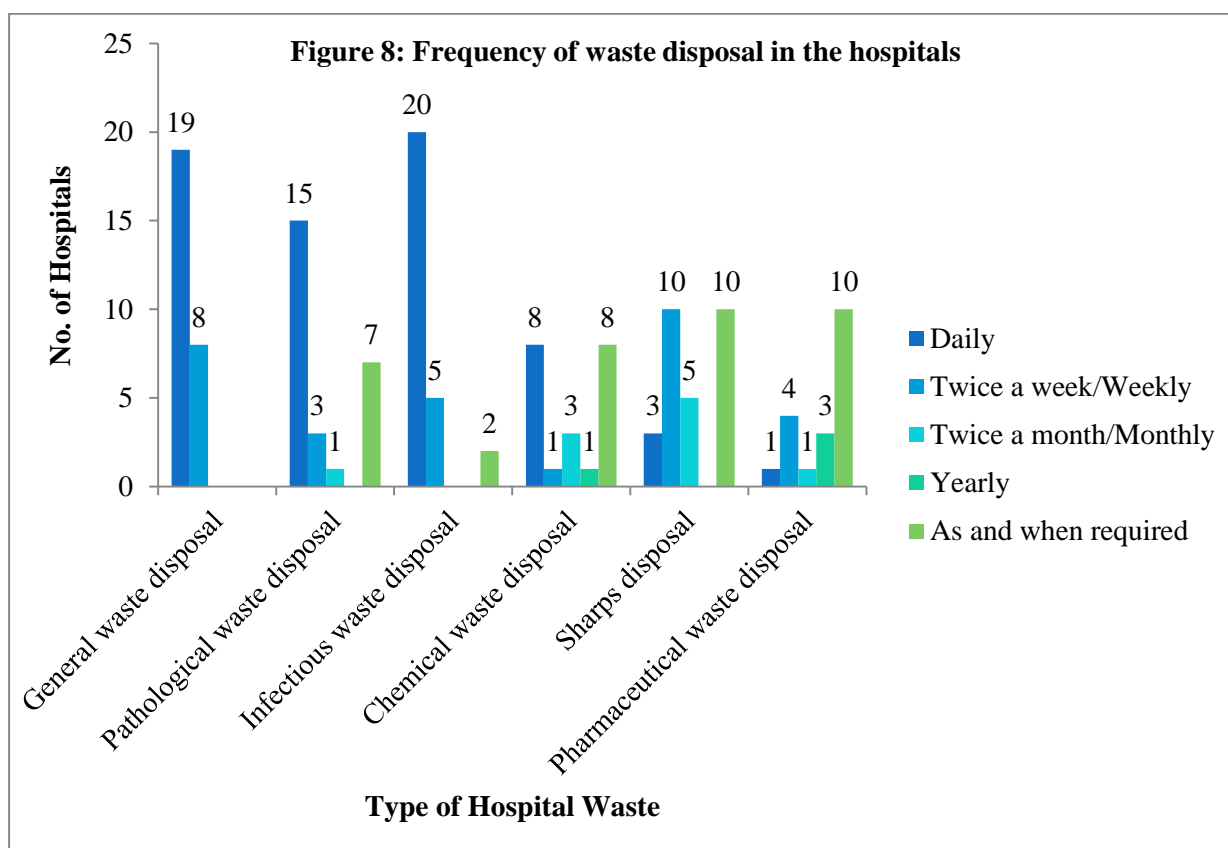


As given below waste containers are provided at various locations in and around the hospital compound (Figure 7).

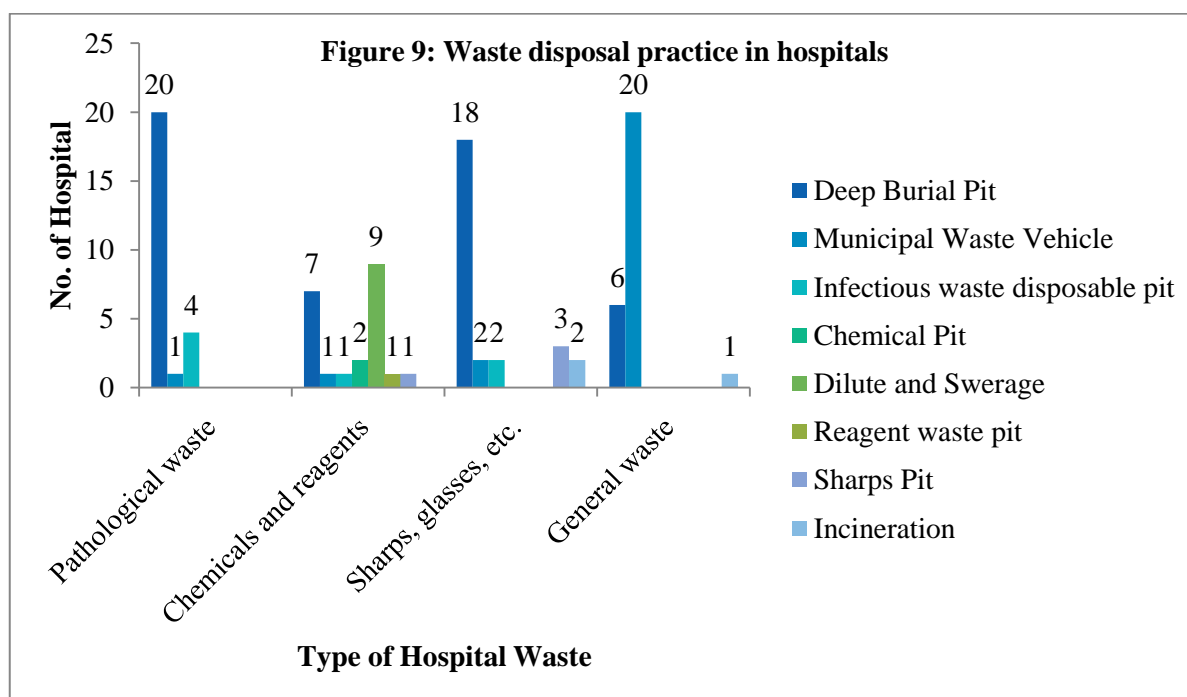
Figure 7: Availability of waste containers in different locations within the hospitals



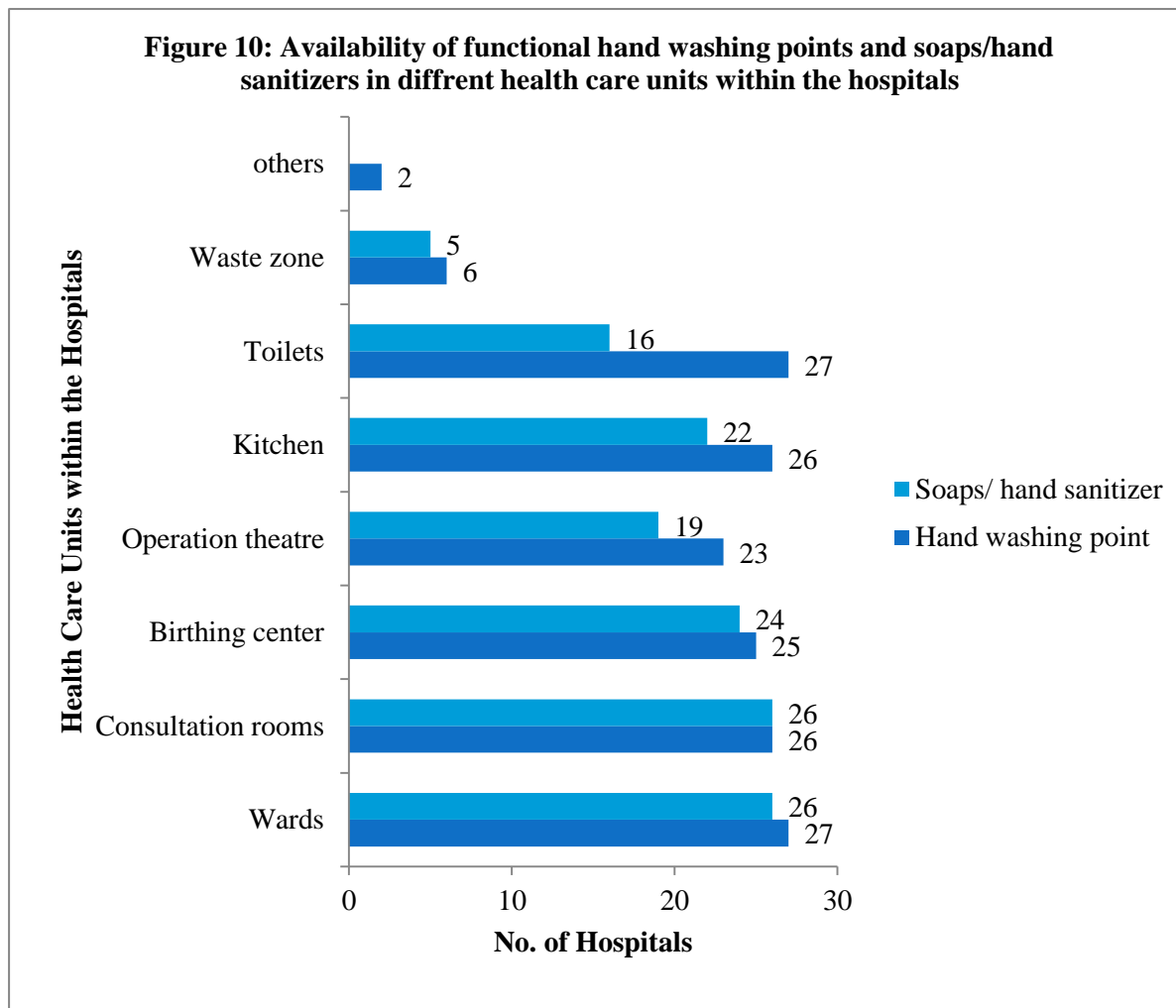
While it is evident that general wastes, pathological wastes and infectious wastes are disposed daily in majority of the hospitals, chemical wastes, sharps, and pharmaceutical wastes are disposed off monthly or as and when required (Figure 8)



Majority of the solid wastes are disposed in some sort of pit like deep burial pit, infectious waste disposal pit, chemical waste pit and reagent waste pit. Liquid wastes are diluted and disposed off in the sewerage (Figure 9).



The figure below depicts the presence of functional hand washing points in almost all units of the hospital. However, there is significant absence of functional hand washing points in MCH, dental, labs, storeroom, mortuary and laundry units (Figure 10). The study also found that soaps/ hand sanitizers are available for hand washing at almost all the hand washing points except at the waste zone.



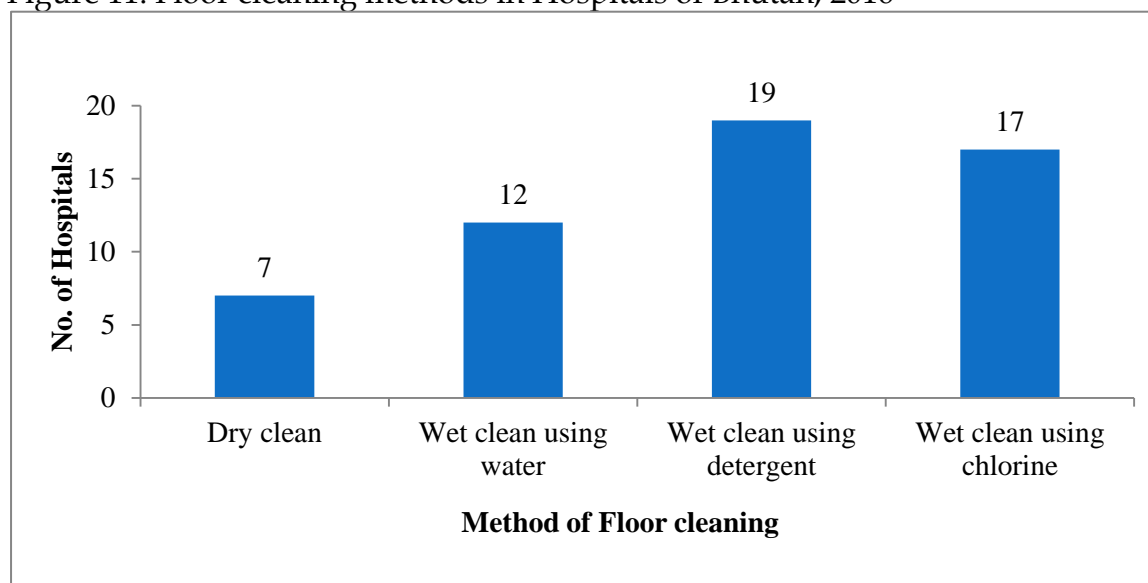
4.7 Infection Control

Hospitals floor cleaning is done for an average of 1.81 times in a day (SD: 0.77) with maximum being 4 times and minimum being 1 time (Table 9).

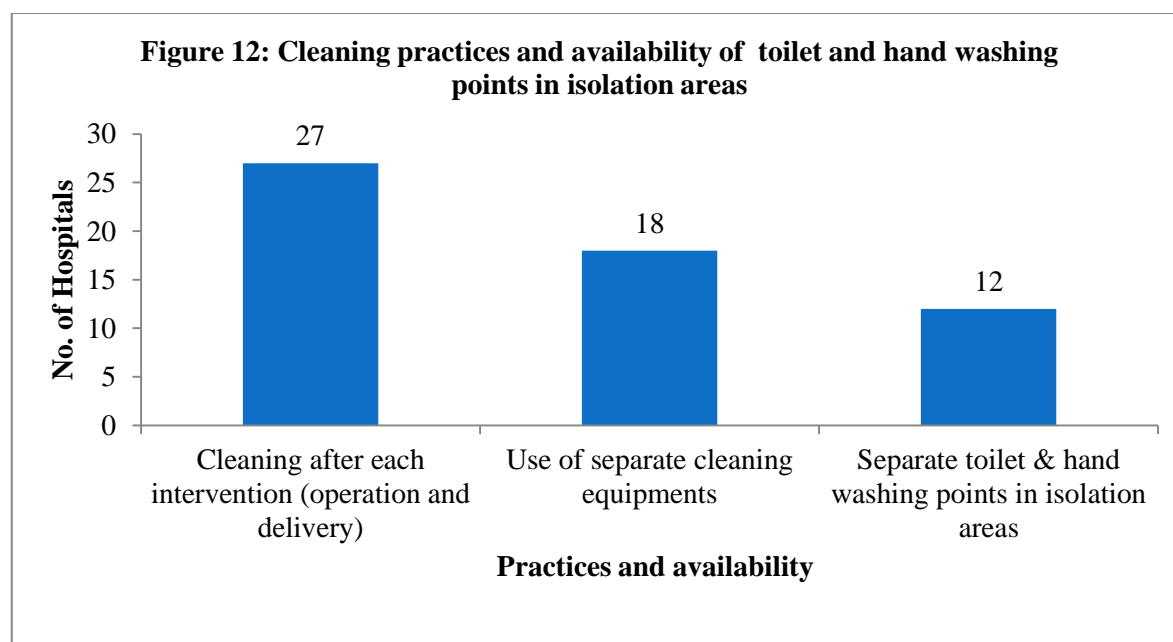
	N	Minimum	Maximum	Mean	Std. Deviation
Floor cleaning in a day	27	1	4	1.81	0.89
Supply of detergent and chlorine solution	24	1	54	32.92	21.35

The various methods of floor cleaning are listed below as given in Figure 11.

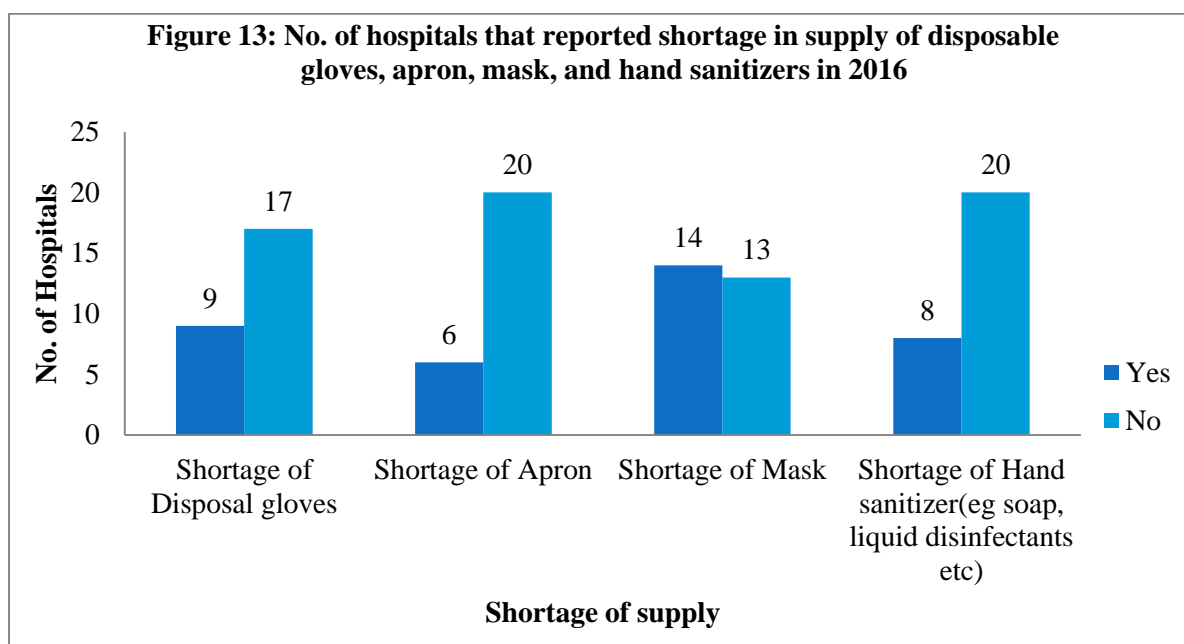
Figure 11: Floor cleaning methods in Hospitals of Bhutan, 2016



27 hospitals clean after each intervention in case of operation and delivery. 18 hospitals use separate cleaning equipments for specific room and 12 hospitals have separate toilet and hand washing points in isolation areas (Figure 12).



9 hospitals reported shortage of disposal gloves, 6 reported shortage of apron, 14 reported shortage of mask and 8 reported shortage of soaps/ hand sanitizers in the last twelve months (Figure 13).



5. CONCLUSION

The report provides a comprehensive picture of the state of WASH in health care facilities. Water, sanitation and hygiene are studied taking into consideration the various variables such as water quantity, water quality, water points, sanitation access, drainage, waste disposal and infection control.

Annex 1: Water sufficiency for all the daily needs in the hospitals of Bhutan, 2016		
Name of Health Facilities	Is there sufficient water for all the daily needs in the facility (with 24 hours back up supply)?	
Bumthang Hospital	Yes	-
Gedu Hospital	-	No
Dagapela Hospital	-	No
Gasa BHU I	Yes	-
Bali BHU I	Yes	-
Lhuntse Hospital	-	No
Eastern Regional Referral Hospital	Yes	-
Paro Hospital	-	No
P/Gatshel Hospital	-	No
Punakha Hospital	Yes	-
S/Jongkhar Hospital	Yes	-
Samtse Hospital	-	No
Central Regional Referral Hospital	Yes	-
JDWNRH	-	No
Trashigang Hospital	Yes	-
Trashiyangtse Hospital	Yes	-
Trongsa Hospital	Yes	-
Damphu Hospital	-	No
Bajo Hospital	Yes	-
Yebilaptse Hospital	-	No
Tsimalakha Hospital	Yes	-
Gidakom Hospital	Yes	-
Phuenstholing Hospital	-	No
Gomtu Hospital	Yes	-
Sipsu Hospital	Yes	-
Riserboo Hospital	-	No
Dewathang Hospital	-	No
Sarpang Hospital	Yes	-
Total n(%)	16 (57.1)	12 (42.9)

Annex 2: Sufficient water supply with 24/7 back up				
Sl. No	Hospital Name	Yes	No	Total
1	Bumthang	1	0	1
2	Chukha	0	1	1
3	Dagana	0	1	1
4	Gasa	1	0	1
5	Haa	1	0	1
6	Lhuntse	0	1	1
7	Mongar	0	1	1
8	Paro	0	1	1
9	P/Gatshel	0	1	1
10	Punakha	1	0	1
11	S/Jongkhar	1	0	1
12	Samtse	0	1	1
13	Gelephu	1	0	1
14	Thimphu	0	1	1
15	Trashigang	1	0	1
16	Trashiyangtse	1	0	1
17	Trongsa	1	0	1
18	Tsirang	0	1	1
19	Wangduephodrang	1	0	1
20	Zhemgang	0	1	1
21	Tsimalakha	1	0	1
22	Gidakom	1	0	1
23	Phuenstholing	0	1	1
24	Gomtu	1	0	1
25	Sipsu	1	0	1
26	Riserboo	0	1	1
27	Dewathang	0	1	1
28	Sarpang	1	0	1
	TOTAL	15	13	28

Annex 3: Water Chlorination					
Sl. No.	Hospital Name	Un-chlorinated	Chlorinated	Don't know	Total
1	Bumthang	0	1	0	1
2	Chukha	0	1	0	1
3	Dagana	1	0	0	1
4	Gasa	1	0	0	1
5	Haa	1	0	0	1
6	Lhuntse	1			
7	Mongar	0	1	0	1
8	Paro	0	1	0	1
9	P/Gatshel	1	0	0	1
10	Punakha	1	0	0	1
11	S/Jongkhar	0	1	0	1
12	Samtse	0	0	1	1
13	Gelephu	0	1	0	1
14	Thimphu	0	1	0	1
15	Trashigang	0	1	0	1
16	Trashiyangtse	1	0	0	1
17	Trongsa	0	1	0	1
18	Tsirang	0	1	0	1
19	Wangduephodrang	0	1	0	1
20	Zhemgang	1	0	0	1
21	Tsimalakha	0	1	0	1
22	Gidakom	0	1	0	1
23	Phuenstholing	0	1	0	1
24	Gomtu	0	1	0	1
25	Sipsu	1	0	0	1
26	Riserboo	1	0	0	1
27	Dewathang	0	1	0	1
28	Sarpang	0	1	0	1
	TOTAL	10	17	1	28

Annex 4: Common form of water contamination

Sl. No.	Hospital Name	Do not know	E-coli	E-coli/Fecal Contamination	E-coli/Fecal Contamination /Mud/Debris	Fecal Contamination	Lime and Industrial dust particles	Mud/Debris	Rain water	Total
1	Bumthang	0	0	0	0	0	0	0	0	0
2	Chukha	0	0	0	0	0	0	0	0	0
3	Dagana	1	0	0	0	0	0	0	0	1
4	Gasa	0	0	0	0	0	0	0	0	0
5	Haa	0	0	1	0	0	0	0	0	1
6	Lhuntse	0	0	0	0	0	0	0	0	0
7	Mongar	0	0	0	0	0	0	1	0	1
8	Paro	0	0	0	0	0	0	1	0	1
9	P/Gatshel	0	0	0	1	0	0	0	0	1
10	Punakha	0	0	1	0	0	0	0	0	1
11	S/Jongkhar	0	0	0	0	1	0	0	0	1
12	Samtse	0	0	0	0	0	0	0	0	0
13	Gelephu	0	0	1	0	0	0	0	0	1
14	Thimphu	0	0	0	0	0	0	1	0	1
15	Trashigang	0	0	0	0	0	0	0	1	1

16	T/yangtse	0	1	0	0	0	0	0	0	1
17	Trongsa	0	0	0	0	0	0	0	0	0
18	Tsirang	0	0	0	0	0	0	0	0	0
19	Wangdue	0	0	1	0	0	0	0	0	1
20	Zhemgang	0	0	0	0	0	0	1	0	1
21	Tsimalakha	0	0	0	0	0	0	0	0	0
22	Gidakom	0	0	0	0	0	0	0	0	0
23	P/Ling	0	0	1	0	0	0	0	0	1
24	Gomtu	0	0	0	0	0	1	0	0	1
25	Sipsu	0	0	0	0	0	0	0	0	0
26	Riserboo	0	0	0	0	0	0	1	0	1
27	Dewathang	0	0	0	0	0	0	1	0	1
28	Sarpang	0	0	1	0	0	0	0	0	1
Total		1	1	6	1	1	1	6	1	28

Annex 5: Survey Questionnaire

SURVEY FORM WASH IN HEALTH CARE FACILITIES DISTRICT HOSPITALS OF BHUTAN

2016

**PUBLIC HEALTH ENGINEERING DIVISION
DEPARTMENT OF PUBLIC HEALTH
MINISTRY OF HEALTH**

Assessor(s): _____

Contact details: _____

Date of assessment: ____/____/____

SECTION I: HEALTH FACILITY GENERAL INFORMATION

1. Contact person: _____
2. Phone no: _____
3. Hospital name: _____
4. Dzongkhag : _____
5. Year of establishment: _____
6. No of staff:
 - i. Doctor: _____
 - ii. Nurse: _____
 - iii. GSP/Ward boy /trained plumber: _____/ _____/ _____
 - iv. Cook: _____
7. No of inpatients/year(2015/2014/2013): _____
8. No of outpatients/year(2015/2014/2013): _____
9. No of beds: _____

SECTION II: WATER QUANTITY (tick appropriate one)

1. Is there sufficient water for all the daily needs in the facility (with 24 hours back up supply)?
Yes ☐
No ☐
If 'No', why? : _____
2. Is there routinely a time of year when the facility has a severe shortage or lack of water?
Yes ☐
No ☐
If 'Yes', when? : _____
3. During the past 12 months how many times was the water supply from the source interrupted for more than two hours at a time?
No. of times: _____
4. Does your facility have separate water storage tank?
Yes ☐
No ☐
If 'No', mention comments: _____
5. What is the average consumption of water in a month of your facility? (*Please provide data for a period of 12 months*)

Answer this question ONLY if your facility is connected to the municipality water distribution

	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
Qty (Litres)												

6. What is the discharge at the reservoir/ source (measured in litres per second)?

SECTION III: WATER QUALITY

1. What is the main source of water for the facility? (**tick appropriate source**)
 - i. Protected Spring
 - ii. Surface water (river ,stream, pond, dam ,lake, irrigation channel ,canal)
 - iii. Rain water collection
 - iv. Protected well
 - v. None of the above (specify):_____
2. Is water chlorinated?(**tick appropriate one**)
 - i. Un-chlorinated
 - ii. Chlorinated
 - iii. Don't know
3. What do you usually do to the water to make it safer to drink?(**tick appropriate one**)
 - i. Boiling
 - ii. Add bleach/chlorine
 - iii. Use a water filter
 - iv. Solar disinfection
 - v. Others(specify):_____
4. On an average, for how many days is your facility water turbid (cloudy)?
No of days in a month: _____
5. How many times in a year did you treat your water quality?
 - i. One time
 - ii. Two times
 - iii. Three times
 - iv. None (If none, specify why?) _____
6. What is the most common form of water contamination at your facility?

SECTION IV: WATER POINTS

1. Provide the maximum number of people (in/out-patients, staff & all visitors) that uses health facility water points in a day?

Nos. (approx.) _____

2. How many water points do you have and how many of them are functioning currently?

	Outpatients	Inpatients	Kitchen
Total number of water points			
Functionality numbers			

SECTION V: SANITATION ACCESS

1. How many following toilet facilities do you have?

Toilet type	Outpatients	Inpatients/wards	Consultation room	Kitchen
European type toilet (nos)				
Indian pour flush type toilet (nos)				
Urinal pan (nos)				

2. How many toilets are **NOT** functioning?

Toilet type	Outpatients	Inpatients	Consultation room	Kitchen
European type toilet (nos)				
Indian pour flush type toilet (nos)				
Urinal pan (nos)				

3. Do you have toilet facilities that are friendly for? (**tick the appropriate one**)

	Disabled patient		Elderly		Pregnant women	
	inpatient	outpatient	inpatient	outpatient	inpatient	outpatient
Yes						
No						

4. Which of the following facility is available for wiping after defecation? (**tick appropriate one**)

- i. Toilet paper
- ii. Water
- iii. Both
- iv. Others(specify)_____

5. What is the routine for cleaning the toilet? (**tick the appropriate one**)

	Inpatient	Outpatient	Consultation room
Once a day			
Twice a day			
Thrice a day			
More than thrice			

SECTION VI: DRAINAGE (tick appropriate one)

1. Is grey water visible in the compound?
Yes ☐
No ☐
2. Does your facility have drains or canals facility that is linked to Municipal or thromde?
Yes ☐
No ☐
3. Are your facility's drains or canals blocked frequently (within compound)?
Yes ☐
No ☐

SECTION VII: WASTE MANAGEMENT

1. Do your facility have system of separating waste at source by providing different types of waste containers?(e.g. infectious , non-infectious , sharps etc)
Yes ☐
No ☐

2. Do you have waste containers in: (tick mark if “yes” ; cross mark if “no”) in the blank provided below
- Ward_____
 - Waiting areas_____
 - Operating suites_____
 - Delivery rooms _____
 - Kitchen _____
 - Toilet _____
 - Public utility/ recreational areas around the facility _____
3. Is health care waste such as needles and dressing materials etc, observed within facility compound?
- Yes ☐
- No ☐
4. How many times do you dispose the following waste?
- General waste_____
 - Pathological waste_____
 - Infectious waste_____
 - Chemical waste_____
 - Sharps_____
 - Pharmaceutical waste_____
 - Others (specify the waste)_____
5. Where do you dispose the following wastes:
- Pathological waste

 - Chemicals and reagents

 - Sharps, glasses, etc.

 - General waste

6. Do you have functional hand washing points at following health care units? (indicate as ‘yes’ otherwise ‘no’)
- Wards_____
 - Consultation rooms_____
 - Birthing center_____
 - Operation theatre_____
 - Kitchen_____
 - Toilets_____
 - Waste zone_____
 - Others(specify the location)_____

7. Do you have soaps/ hand sanitizers for washing hands at following washing points?
(indicate 'yes' or 'no')
- i. Wards_____
 - ii. Consultation rooms_____
 - iii. Birthing center_____
 - iv. Operation theatre_____
 - v. Kitchen_____
 - vi. Toilets_____
 - vii. Waste zone_____
 - viii. Others(specify the location)_____
8. Do you have posters at strategic locations reminding users of correct hand washing procedures?
- Yes ☐
- No ☐

SECTION VIII: INFECTION CONTROL

1. How many times facility floor is cleaned in a day?
No .of times: _____
2. How is the floor cleaned (**choose more than one if applicable**)?
- a. Dry clean
 - b. Wet clean using water
 - c. Wet clean using detergent
 - d. Wet clean using chlorine
 - e. Others specify_____
3. Do you clean after each intervention in the case of operation and delivery?
- Yes ☐
- No ☐
4. Do you use separate cleaning equipments for specific room?
- Yes ☐
- No ☐
5. How many times your facility received the supply of detergent and chlorine solution for cleaning during the last twelve months?
No of times_____
6. Does your facility have separate toilet and hand washing points in isolation areas?
- Yes ☐
- No ☐

7. During last twelve months, did your facility face shortage of supply in any of the following, **(if faced shortage indicate as ‘yes’ otherwise ‘No’)**:

- i. Disposal gloves_____
- ii. Apron_____
- iii. Mask_____
- iv. Hand sanitizer(eg soap, liquid disinfectants etc)_____

***** End *****



Public Health Engineering Division
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