

# WASH in HCF

## Global Learning Event

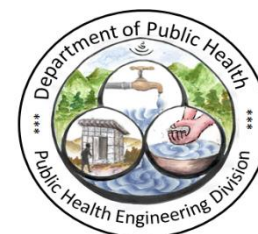
Kathmandu, Nepal  
28-30 March 2017



**Understanding WASH in Health Care Facilities in Bhutan**



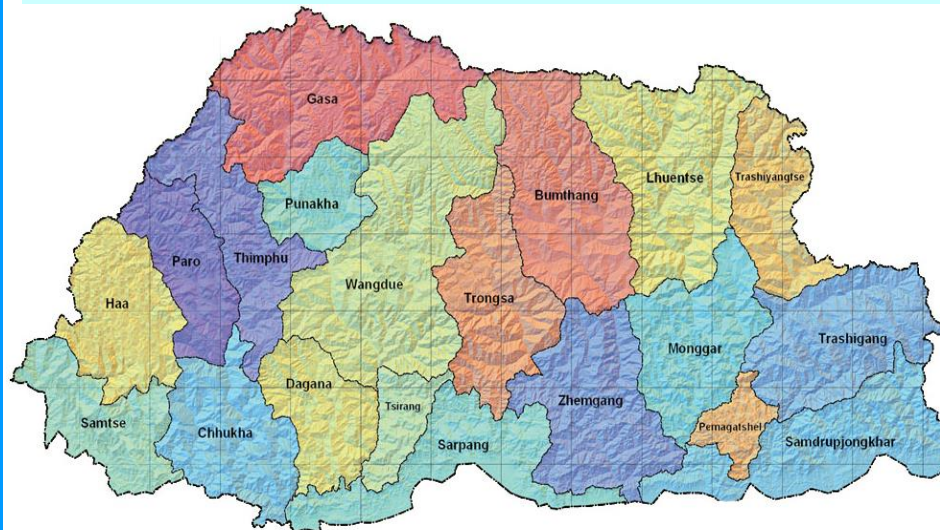
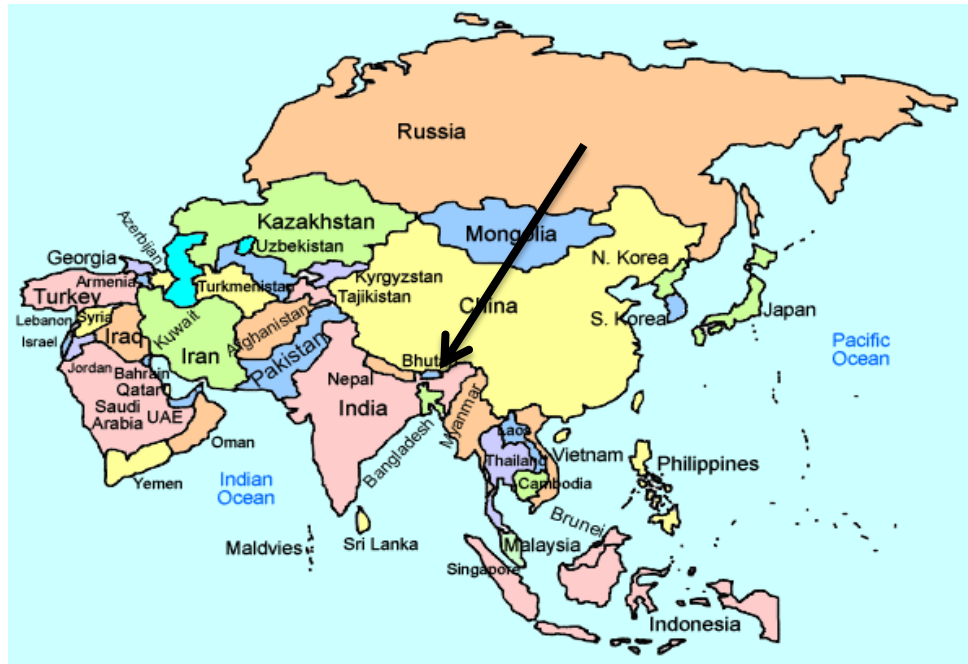
*Rinchen Wangdi, Chief Engineer  
Public Health Engineering Division  
Department of Public Health  
Ministry of Health*



# Presentation Overview

- Country Profile
- Background (*Health System in Bhutan, Health Care Facilities in Bhutan, Rationale for the study, Scope etc.*)
- Methodology (*Study design, setting & exclusion criteria*)
- Findings
- Next Step & Recommendations

# Country Profile.....



## Kingdom of Bhutan at a Glance

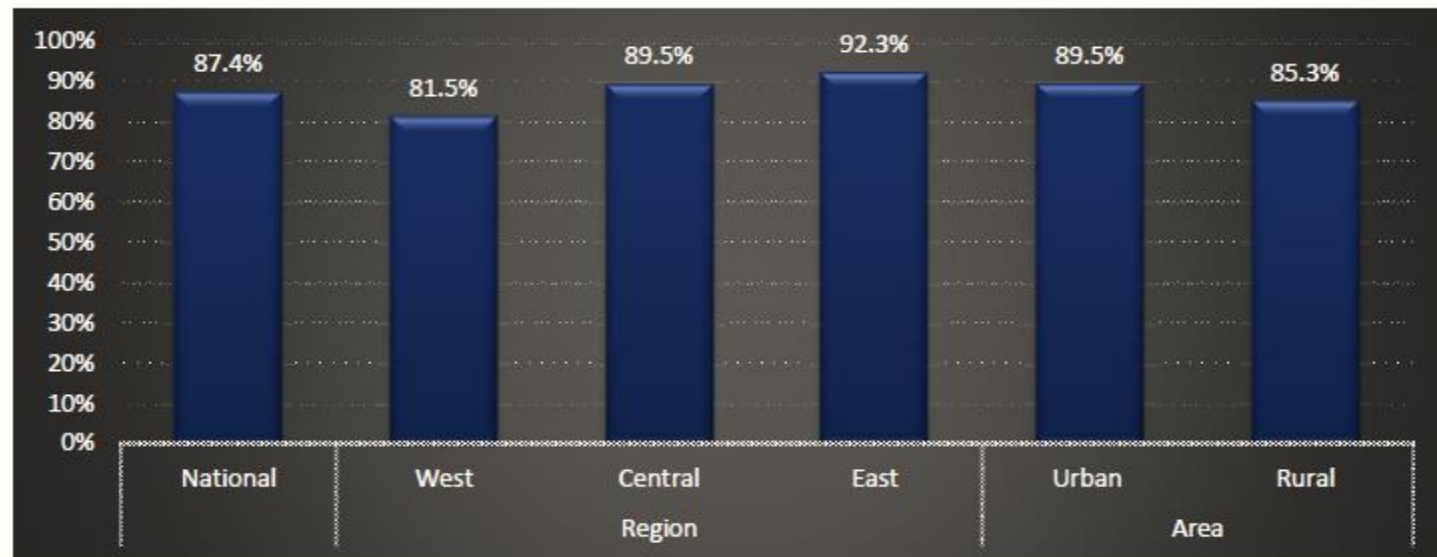
|                    |                        |
|--------------------|------------------------|
| Capital            | Thimphu                |
| Area               | 38,394 Km <sup>2</sup> |
| Population         | 768,577                |
| Population Density | 20/Km <sup>2</sup>     |
| Per capita GDP     | US\$ 2683              |
| Life expectancy    | 70 years               |
| Rural Population   | 70.62 %                |
| Health Coverage    | 90%                    |
| Forest Cover       | 70.5%                  |

*Source: National Standards Bureau*

# National Status on WASH

## HOUSING CHARACTERISTICS

| Source of drinking water, sanitation & waste disposal                                    | %    |
|--|------|
| % of population with access to improved drinking water source                            | 97.7 |
| % of population with access to improved sanitation facility (includes shared facilities) | 66.3 |
| Households disposing off their household wastes using public garbage collection system   | 22.4 |

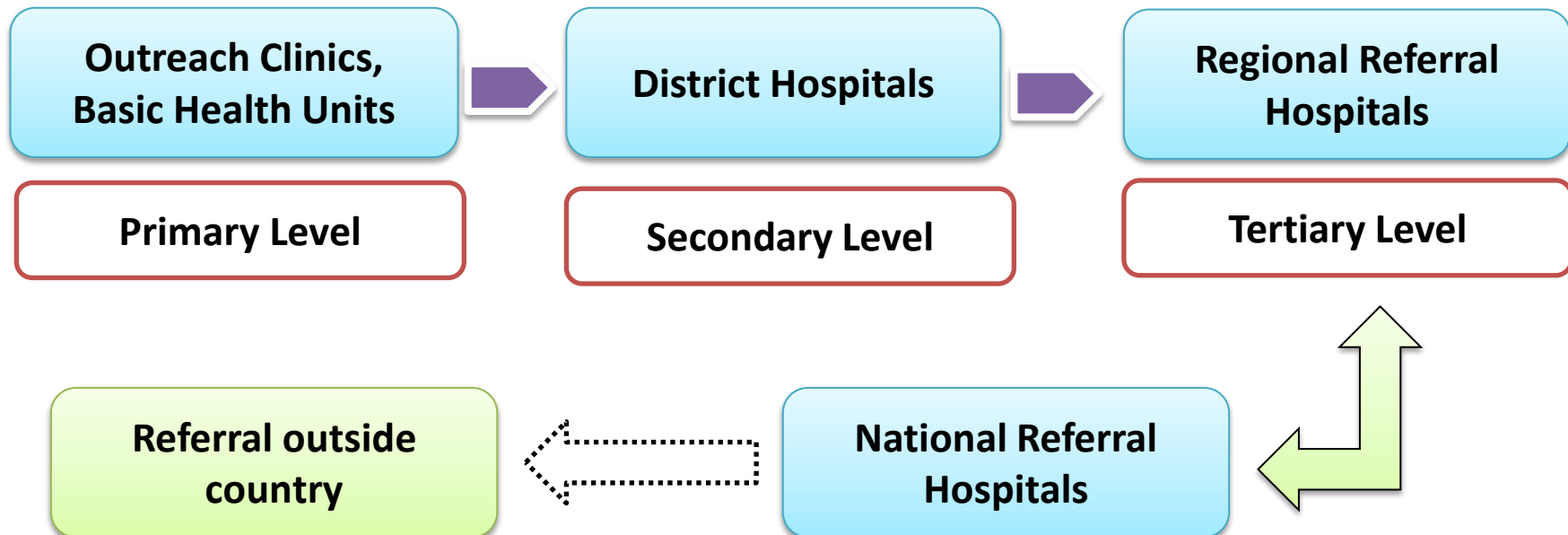


Source : National Nutritional Survey, 2015

# Background : *Health System in Bhutan*

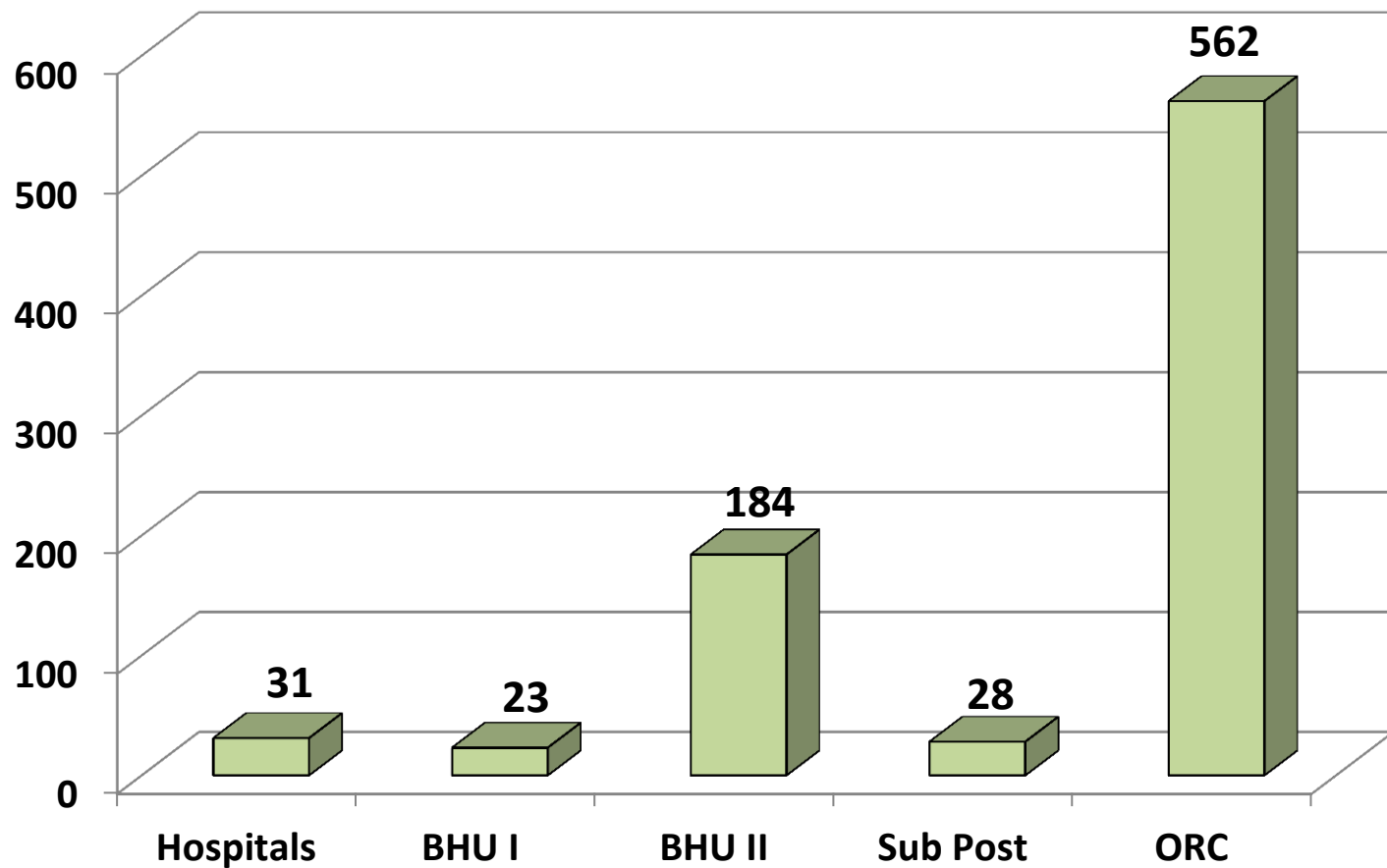
---

The Section 21 and 22 under Article 9 of the constitution of the Kingdom of Bhutan states that, **“the state shall provide free access to basic public health services in both modern and traditional medicines”** and **“the state shall endeavor to provide security in the event of sickness and disability or lack of adequate means of livelihood for reasons beyond one’s control”**



## Background : *Health Care Facilities in Bhutan*

---



Source : AHB 2014

## Background : *Scope*

---

2 Regional  
Referral Hospitals

15 District  
Hospitals

National Referral  
Hospital

8 other Hospitals

2 BHU Grade I

### FOCUS AREA:

- ☐ **Water Supply** : *Coverage/Access, Functionality & Quality*
- ☐ **Sanitation** : *Coverage/Access & Functionality*
- ☐ **Hygiene** : *Handwashing*
- ☐ **Others** : *Hospital waste, Infection Control*

# Methodology : *Study Design*

---

- ☐ Questionnaire from the previous study;
- ☐ Self reporting and spot validation by programme officers;
- ☐ Data from the 4 Hospitals collected by the programme officers;
- ☐ Data entry : EpiData Software;
- ☐ Analysis : SPSS Software;



# Findings : *Water Supply*

---

## COVERAGE



## Adequacy/Functionality

- 43% (12 Hospitals) does not have 24/7 water supply;
- 39.3%(11 Hospitals) of hospitals face sever water shortages on routinely basis;
- 6 Hospitals have water supply disruption during monsoon season;
- 4 hospitals face water shortages during dry seasons;

# Findings : Water Supply

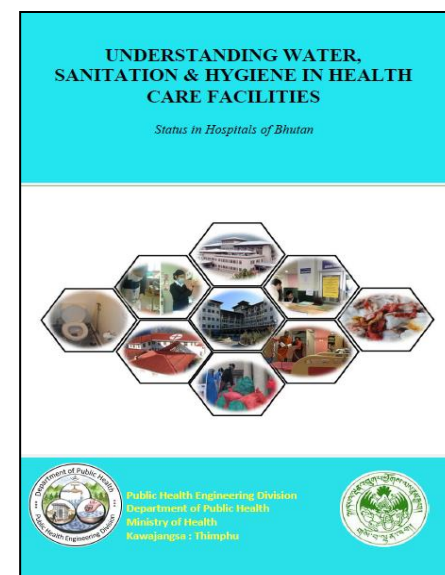
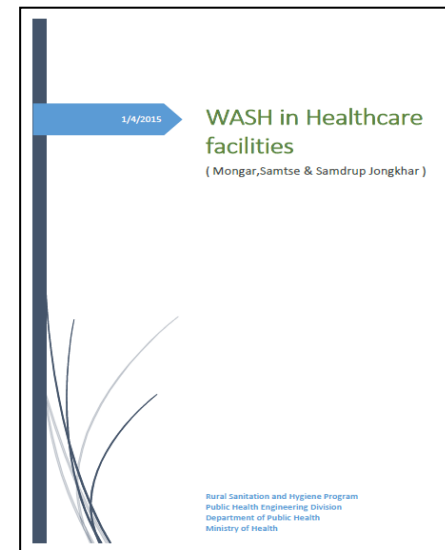
Crosstab With Water Source And Water Supply

| Water Source | Water supply interrupted > 2Hrs |        | Water shortage in last 12 months |        |
|--------------|---------------------------------|--------|----------------------------------|--------|
|              | Yes (%)                         | No (%) | Yes (%)                          | No (%) |
| Spring       | 59                              | 75     | 62                               | 63     |
| Stream       | 41                              | 25     | 38                               | 37     |

Above result indicates that water supply is interrupted more frequently when water source is spring as compared to stream.

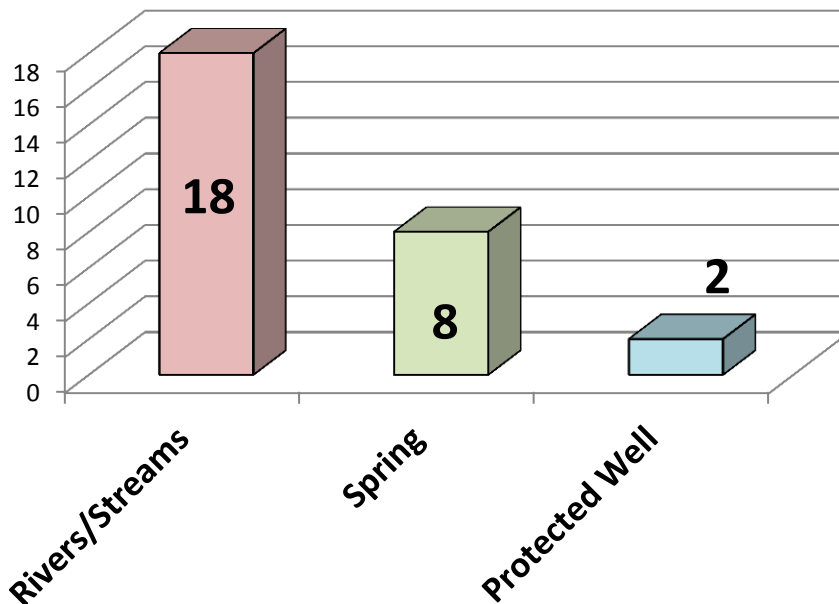
- ☐ 71% of the hospitals faced water supply interruption for more than 2 hours;
- ☐ Samtse District Hospital reported interruption of water supply for 52 times in a year;
- ☐ Water supply at P/gatshel was interrupted for 24 times in one year;

*WASH in Health Care Facilities Report 2016*

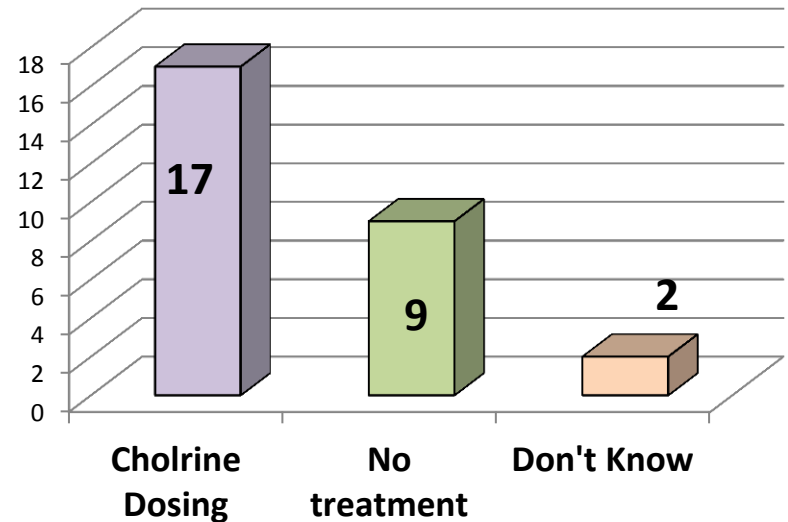


# Findings : *Water Supply*

Water Source



Water Treatment



- All 2304 water points are functional.
- Most common form of water contamination is E-Coli (47%).
- Most common form of treatment – *Point of use*

## Findings : *Sanitation & Hygiene*

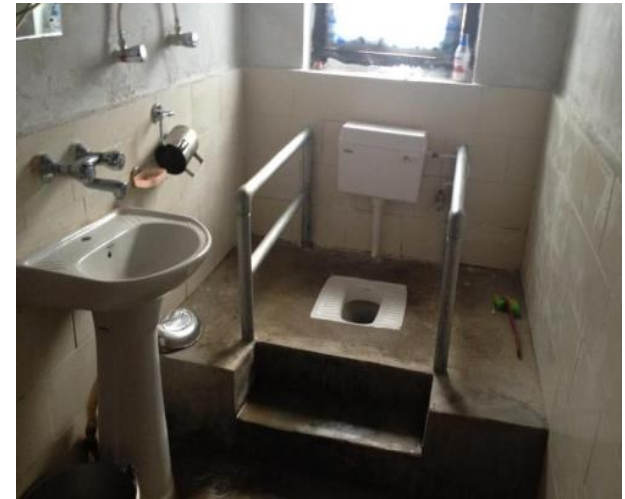
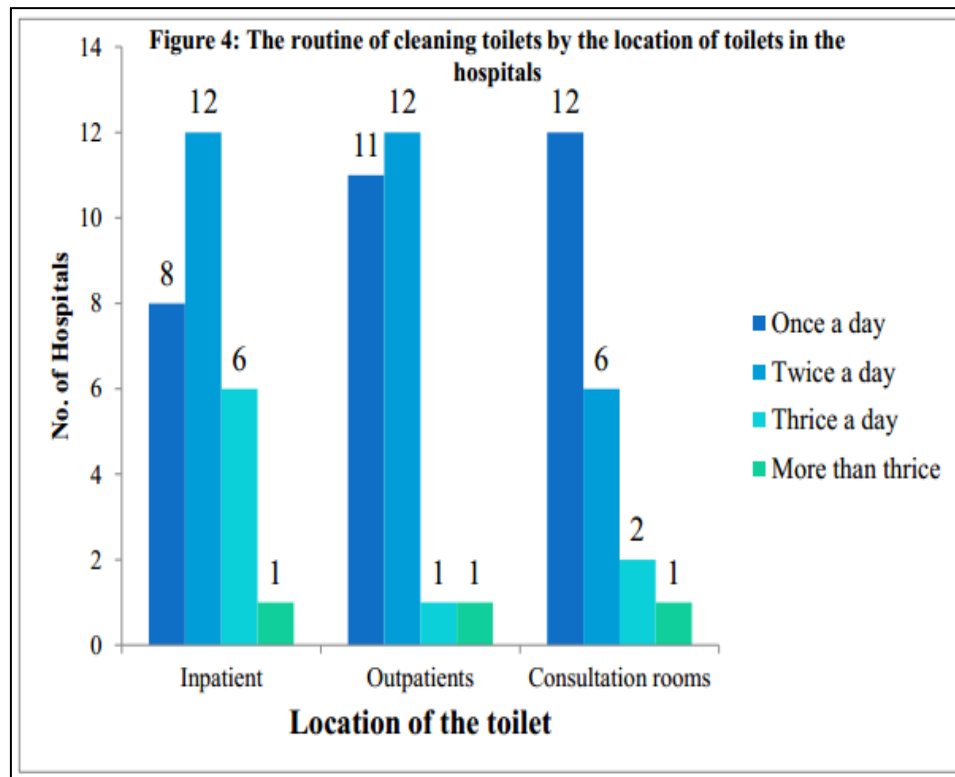
---



Adequacy of toilet units ??

Not an issue for **NOW**...

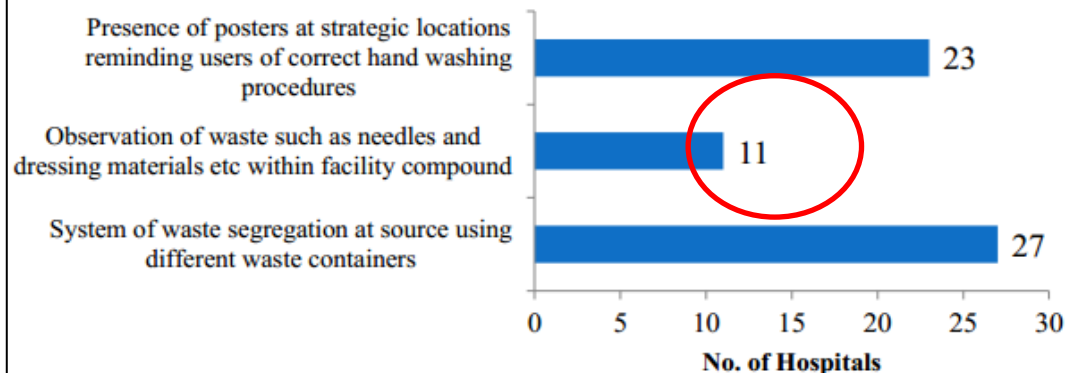
# Findings : *Sanitation & Hygiene*



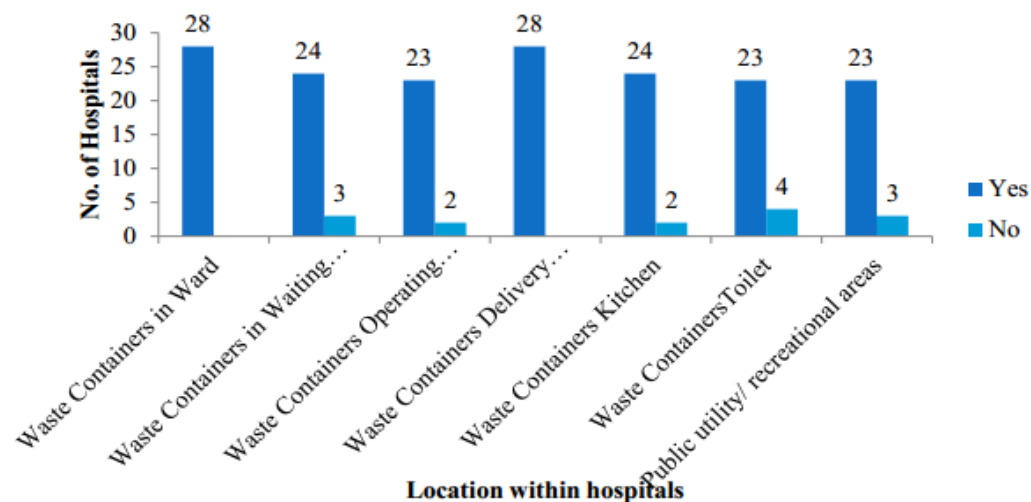


# Findings : Others

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

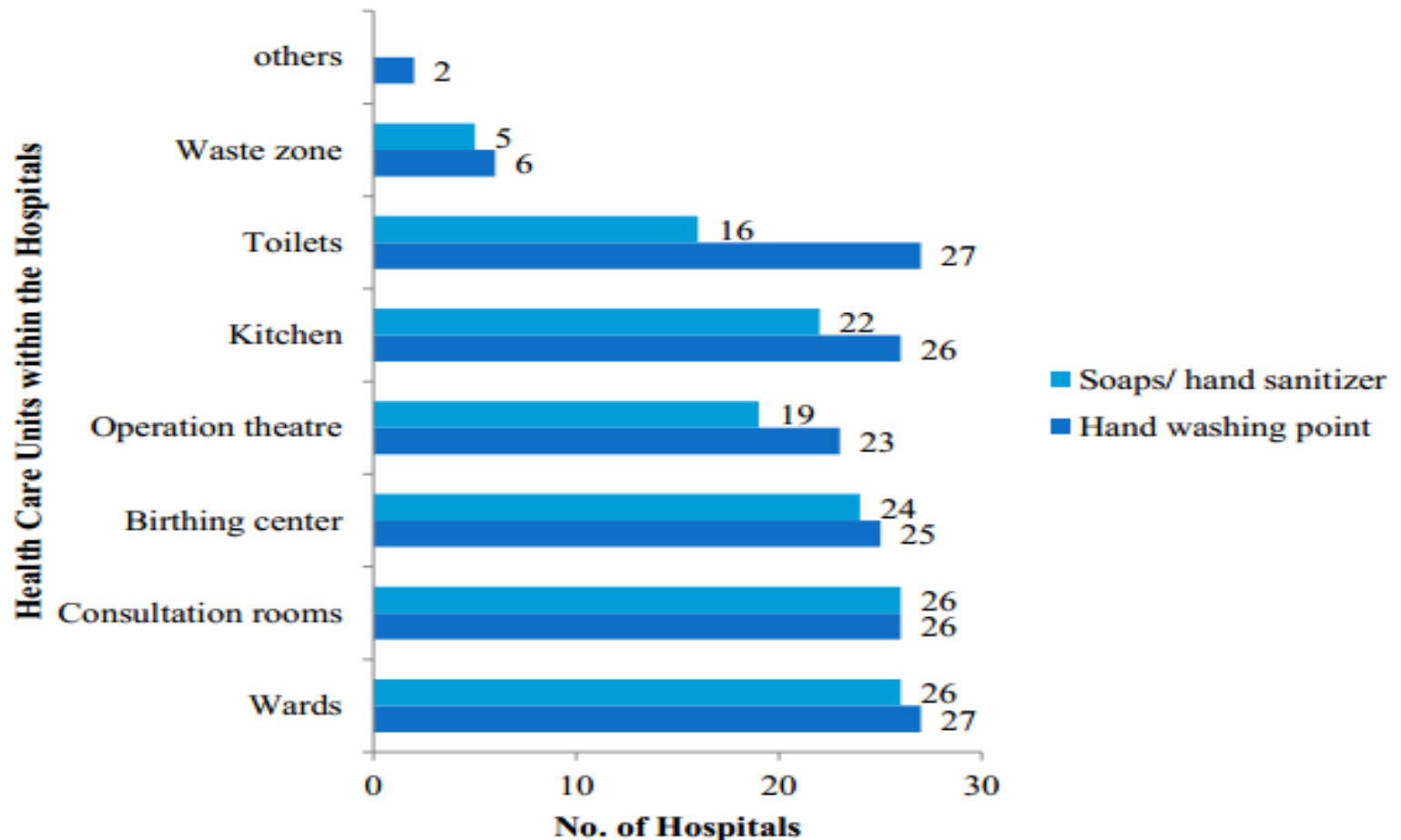


**Figure 7: Availability of waste containers in different locations within the hospitals**



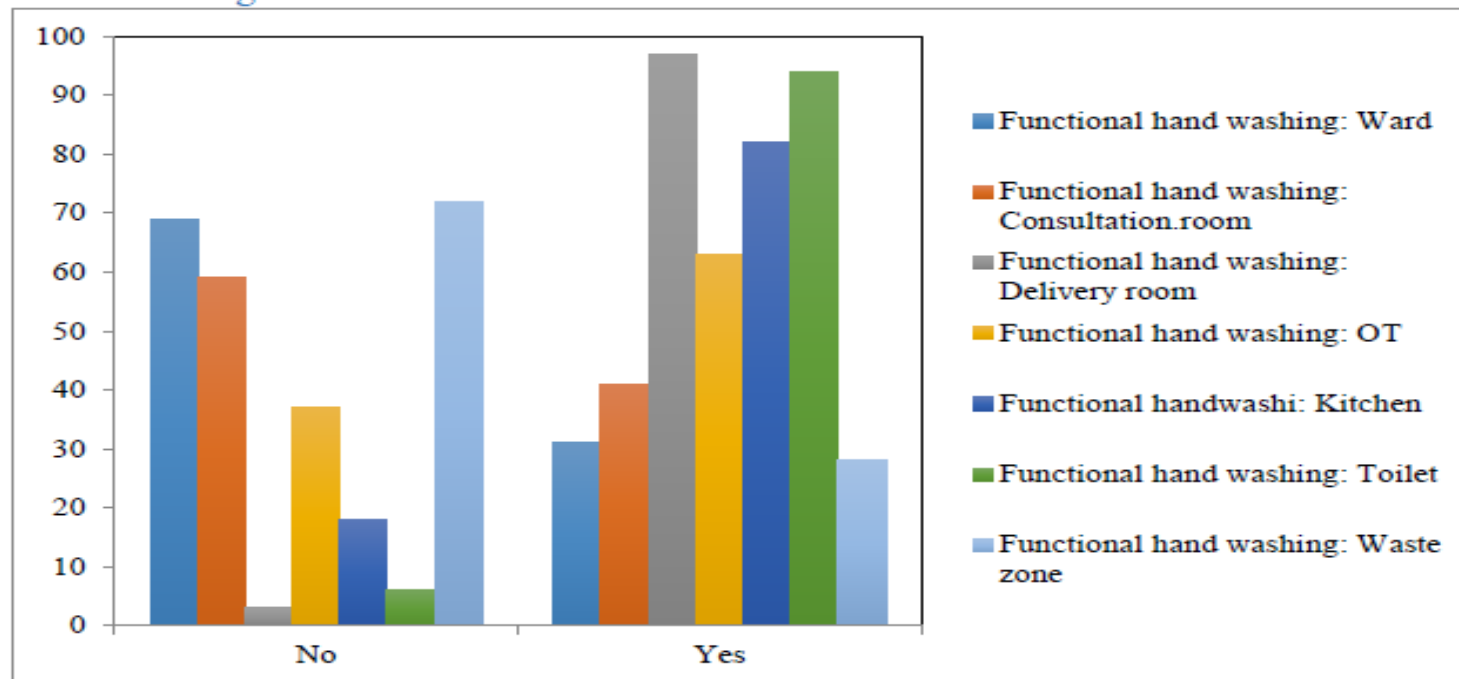
# Findings : *Handwashing*

**Figure 10: Availability of functional hand washing points and soaps/hand sanitizers in different health care units within the hospitals**



# Findings : *Handwashing*

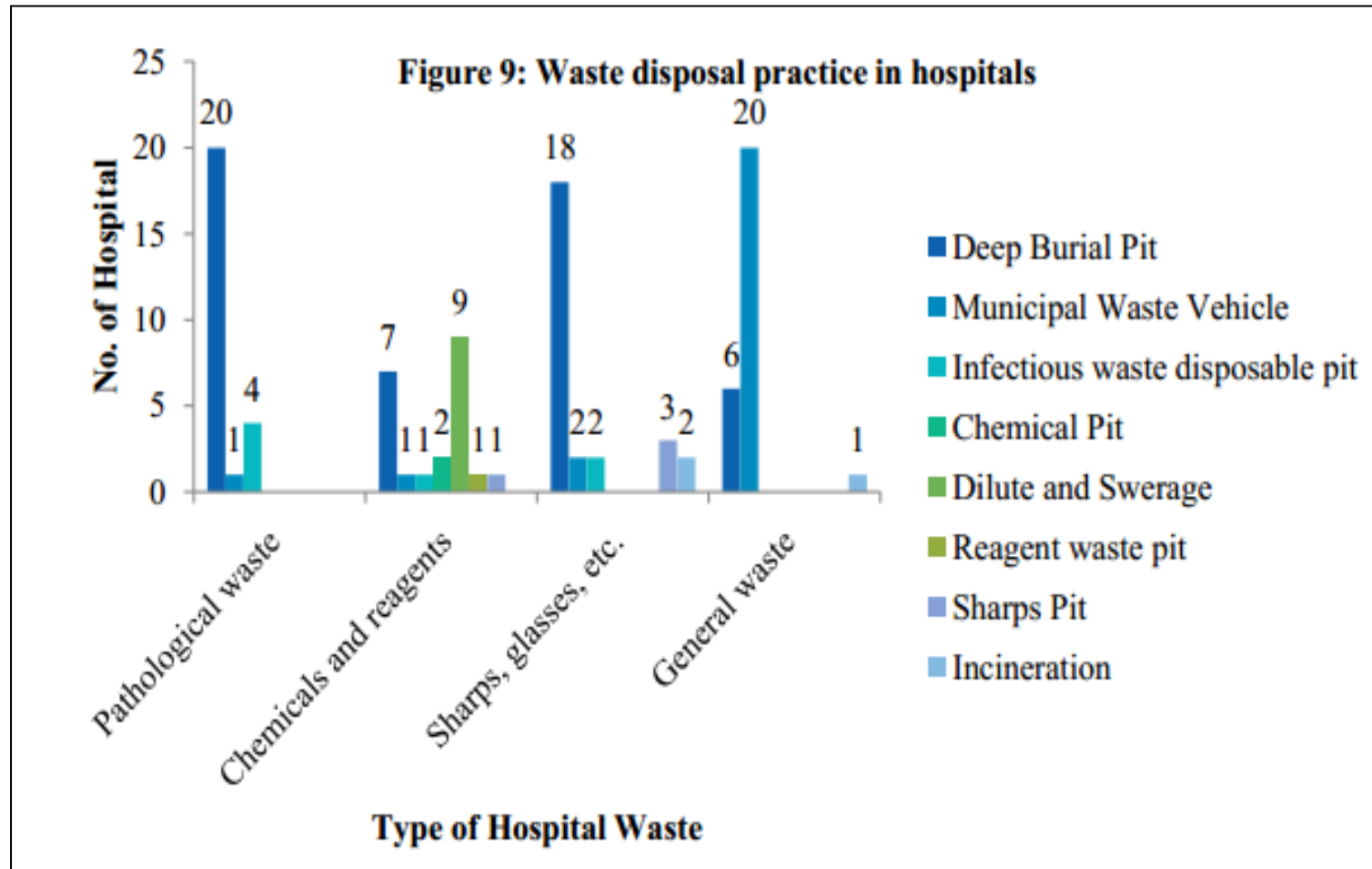
Hand Washing Points



| Is hand washing point functional at: | Mongar |         | S/Jongkhar |         | Samtse |         |
|--------------------------------------|--------|---------|------------|---------|--------|---------|
|                                      | No (%) | Yes (%) | No (%)     | Yes (%) | No (%) | Yes (%) |
| Ward                                 | 59     | 41      | 50         | 50      | 100    | 0       |
| Consultation Room                    | 57     | 43      | 25         | 75      | 78     | 22      |
| Delivery Room                        | 0      | 100     | 0          | 100     | 11     | 89      |
| Operation Theatre                    | 33     | 67      | 50         | 50      | 40     | 60      |
| Kitchen                              | 14     | 86      | 25         | 75      | 25     | 75      |
| Toilet                               | 0      | 100     | 0          | 100     | 22     | 78      |
| Waste Zone                           | 67     | 33      | 75         | 25      | 86     | 14      |



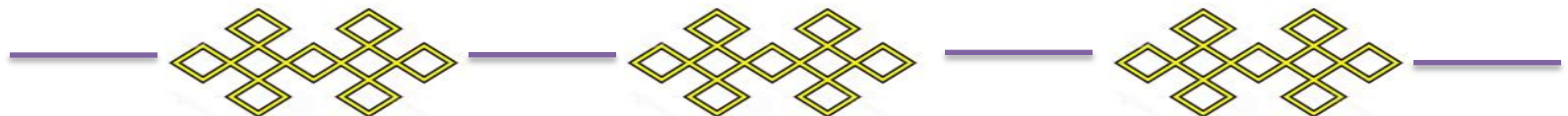
## Findings : *Others*



## *Next Steps & Recommendations*

---

1. Programme mapping ;
2. Periodic monitoring & surveillance of water quality;
3. Separate water source with sufficient number of reservoir tank;
4. Stand alone treatment system for health care facilities;
5. Training of caretaker's to carry out basic O&M of WASH facilities;
6. Review of waste disposal protocol and regular monitoring;
7. Institute Monitoring Framework for WASH in Health Care Facilities;





**THANK YOU**