

A situational analysis of WASH in Sierra Leone
World Health Organization
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List of Accronyms

CHP	Community Health Post
ERC	Ebola Response Consortium
HAI	Healthcare Associated Infections
HCF	Health Care Facility
IPC	Infection Prevention and Control
MCHP	Maternal Child Health Post
MoHS	Minsitry of Health & Sanitation
PHU	Peripheral Health Unit
VIP	Ventilated Pit Latrine
WAU	Western Area Urban
WR	Western Area Rural

Coverage of WASH nationally

There was limited information about the situation of water supply and sanitation prior to the Ebola outbreak in Sierra Leone. The country receives heavy rainfall during the wet season making it a water resource rich (in both surface and ground water). However, drinking water (although a basic necessity) is still scarce in most parts of the country, especially during the dry season and this has a negative impact on the health of many, particularly women and children.

National water and sanitation coverage is estimated at 57% and 13% respectively. Rural water supply for rural areas currently stands at 40%, and 40% of the rural population still practise open defaction due to lack of access to basic sanitation infrastructure and facilities. The national water point mapping done in June 2012 established that only 62% of water points were functional.

Based on information from the Ministry of Water, it is estimated that over 28,000 water points exist in the country. According to the 2012 water point survey by UNICEF, 65.5% of water points were reported to be in use, but only 39% (11,212 points) were functional and in use all year round. There are many contributing factors as to why pumps were not functional, predominately drying up during the season as a result of poor depth development during drilling or manual excavation or as result of poor operation and maintenance systems in place or water wells not dug at the appropriate time of the dry season. Currently the Ministry of Water is undertaking a national survey to establish the exact number of water points in the country.

WASH in health care facilities

During the last quarter of 2015, the Ministry of Health and Sanitation with support from UNICEF and the Ebola Response Consortium (ERC) conducted an assessment of WASH in health care facilities. The national assessment covered a total of 1064 Peripheral Health Units (PHUs) in 12 rural districts of Sierra Leone. Bo and Kenema districts account for the highest number of PHUs in the country, and Bonthe the lowest, followed by Koinadugu district.

Maternal Child Health Posts (MCHP) account for 49% and 73% respectively of PHUs in these districts. Tonkollili has the highest number of MCHPs (73%) serving its population and Kenema has the lowest number of MCHPS (49%). Moyamba has the highest number of CHPs at district level accounting for about 60% of the PHUs in that district. Kailahun, Bombali and Bonthe recorded the highest number of CHPs representing 56%, 54% and 51% respectively of all PHUs in those districts.

Status of WASH in health care facilities in rural districts

A relatively high proportion of PHUs in rural districts have a water supply within the compounds, between 62% and 82%. For example Bombali district accounts for the lowest number of PHUs (19%) without water in their compounds, whereas Kambia district has the highest number of PHUs (70%) without water on their compounds.

A total of 90% of boreholes and 72% of protected hand-dug wells in PHUs were reported to be functional throughout the year. In addition, 92% of the boreholes and 43% of the protected hand-dug wells have functioning hand pumps. It is important to note that 57% of hand dug wells (which happen to be the major water supply source) do not function throughout the year. This is very serious considering the importance of water supply in the prevention of both water borne diseases and clinical infections.

Faecal disposal

Open Pit latrines are the most prevalent toilets: 1343 out of the 2556 (53%) toilets in the 12 rural districts. It is well known that these types of toilet facilities have serious public health risks and therefore large scale use in PHUs should be limited or totally eliminated. The use of VIP latrines is also very significant (790 of 2556 toilets (31%)) across all districts, with the highest number found in Kailahun. The pour flush and flush toilet facilities are the least prevalent in PHUs, with some districts having none.

Hand-washing

Before the Ebola outbreak, hand washing systems and functions were almost zero in most HCFs. The enhancement of infection prevention control (IPC) in HCFs brought a major boost in hand washing facilities, which is now evident in most PHUs across the country. On average, there are about 3 hand washing stations per PHU. Improvements are still called for, as few HCFs have functioning hand washing stations near toilets (9%), and only 17% have functioning hand washing stations and systems in places at points of care. Also, only 23% of these hand washing facilities are reported to have soap and water all the time. The importance of hand washing with soap and water in the fight against Ebola cannot be overemphasised and therefore this situation must be improved.

Waste management

Waste management is being carried out to some extent across PHUs. Most PHUs separate non-medical from medical wastes (66%), have segregated waste bins in the patient treatment areas (71%), and have pits for organics and sharps (52%), 44% of PHUs have disposal areas which are fenced off and 36% of PHUs have functioning incinerators. The most common means of waste treatment is by burning and incineration, and burial was the least commonly used disposal methods in PHUs, averaging about 6 PHUs per district.

Western Area Urban

110 Clinics were surveyed in Western Area (WA). Freetown Municipality (Western Area, Urban) account for 64 of these clinics and the rest (46 clinics) are in Western Rural Area district council. Community Health Centres (CHC) account for the highest number of clinics (40% of the 110 clinics) in Western Area, followed by MCHP (about 31%) and CHP accounting for 27%. The remainder are hospitals which provide tertiary services.

Access to water supply facilities

The protected hand dug wells account for 37%, representing the most commonly available water supply facilities used by clinics in WA, followed by piped water supply (26%). The health care facilities in Freetown are supposed to be connected to the Guma Valley water network however, 19% of all clinics surveyed and half of hospitals (50%) do not have access to this water supply and use boreholes.

Availability of Water

Water is available in boreholes at 40% of urban and 20% of rural at health care facilities in WA. However, the boreholes in about 27% of the 64 clinics in Western Urban and 13% of the 46 clinics in rural WA, do not have water in some months of the year, especially in the peak of the dry season. For the protected hand dug wells about 42% of the 46 clinics of all the wells in rural WA do not have water available throughout the year compared to only 8% in urban areas. There is an urgent need to deepen or rehabilitate boreholes and the protected hand dug wells.

Functionality of hand pumps

A third (33%) of all borehole pumps in clinics are not functioning. About 23% of the hand pumps of protected hand dug wells are non-functional. Most of the non-functional pumps (19%) are found in rural WA.

Access to water storage facilities

Out of the surveyed health facilities in the Western Area, about 74% have water storage facilities, whilst 26% of the 110 clinics do not have water storage facilities. Of the surveyed health facilities with water storage tanks, 81% had elevated tanks, whilst 20% did not have their tanks elevated.

Sanitation facilities in clinics in the Western Area

The survey found that a total of 17 toilets in CHCs, 21 in CHPs, 17 in MCHPs and 1 in the hospital were reported to be functional. The number of non-functioning toilets were as follows: 41 in CHCs, 13 in CHPs, 16 in MCHPs and 1 in the hospital. It should also be noted that 31 of the 70 functional toilets in WA are pit and VIP latrines. These do not comply with the standards and guidelines of MoHS. In addition, about 74% of all toilets in all clinics in WA are not suitable for people with limited mobility.

Waste Management

Much progress has been recorded in the handling and management of waste but waste disposal is still not sufficient and effectively managed. About 86% (37% rural and 49% urban) of all 110 health facilities within the Western Area practice waste segregation.

About 84% of the bins used in these health facilities are segregated in all areas where patients are treated. About 52% of facilities (31% rural and 21% urban) have organic pits for waste disposal, whilst 48% (10% rural and 38% urban) of surveyed health facilities did not have a pit for organic waste.

Of the 110 health facilities surveyed, 48% do not have pits for sharps and 51% do not have incinerators. Organic and sharp pits are a critical component of medical waste management and therefore efforts should be made to remedy this. Similarly, incinerators are critical in the disposal of clinical waste and should therefore be constructed in clinics where they are absent.

Summary

Much still needs to be done, especially in the health care facilities where water supply is compromised by water availability, quantity and quality. Focus should be given to improving water quality, which will help to reduce health care acquired infections and enable better IPC practices. Commitment to improving WASH services and integrating IPC and environmental health programming is important, particularly focusing on the sustainability of current interventions. Above all, although there is great need for improving WASH infrastructures, there is also need to strengthen the capacity of the Directorate of Environmental Health and Sanitation to ensure effective monitoring, supervision and evaluation of WASH interventions throughout the country,