Introduction

Water, Sanitation, and Hygiene (WASH) in health care facilities (HCFs) is a fundamental prerequisite for achieving our national goals and Sustainable Development Goals (SDGs) 3 (ensure healthy lives and promote well-being) and 6 (ensure availability and sustainable management of water and sanitation). Safe water, functioning handwashing facilities, latrines, and hygiene and clean practices are especially important for improving health outcomes linked to maternal, newborn and child, as well as carrying out basic infection prevention and control (IPC) procedures and necessary to prevent antimicrobial resistance (AMR).

To provide quality of care and reduce infection, health care facilities must have the appropriate infrastructure and staff capacities to provide safe, effective, equitable, and people-centered services. WASH services strengthen the resilience of the health care system and prevent or mitigate disease outbreaks, allow effective response to emergencies, including natural disasters-floods.
Background

As the result, since 2016, the WASH and Environmental Health Unit of World Country Office (WCO) has been technically and financially supporting the Ministry of Health (MOH)/National Public Health Institute of Liberia (NPHIL), the Liberian Water and Sewer Corporation (LWSC), and recently, the National WASH Commission (NWASHC) to routinely conduct supportive supervision and mentorship of Water Sanitation and Hygiene (WASH) in health care facilities, water quality surveillance in the slum and rural communities, including water points chlorination, household water treatment and safe storage (HWTSS), and climate-resilient water safety planning (CR-WSP), for Liberia; as a way of intervention, monitoring, and reporting WASH and Environmental health activities at national and subnational levels.

WASH is a very important component of the Sustainable Development Goals (SDGs) and also the current plan of the Government of Liberia and its lined-ministries and agencies including the National Public Health Institute of Liberia (NPHIL) and the Ministry of Health (MOH). However, in rural and urban Liberia, water, sanitation, health care waste, and hygiene standards and practices in the health facilities remain a challenge. As a key intervention for the improvement of WASH standards and practices nationwide, WHO and UNICEF are technically and financially supporting the Ministry of Health (MOH)/National Public Health Institute of Liberia (NPHIL) for the institution of the WASH standards and practices at the health facilities, schools, and communities at subnational levels. Through these supportive supervision and mentorship exercises, health care providers in the facilities who were left out of the regional training (held in 2015) are continue to benefit from the package; which could impact patient and staff safety.

As was earlier reported, this supportive supervision and mentorship have been conducted in eleven (11) which is 73.3% of the fifteen (15) counties in Liberia. The counties are Nimba, Margibi, Grand Cape Mount, Bomi, Bong, Sinoe, Maryland, Grand Gedeh, Grand Bassa, Gbarpolu, and Montserrado Counties. It is anticipated that report or data from the facilities will be used for the effective allocation of resources while at the same time create the basis for the rollout of the WASH and Environmental Health Packages at the districts and health facilities levels, while at the same time enhanced the skill of WASH managers on-site.
The objective of the Health District supervision and mentorship

The objectives of the supervision and mentorship at the targeted health facilities (Bromley Health Center, Nyehn Health Center, Goba’s Town Clinic and the Soniiwein Health Center) in the 3 selected health districts (St. Paul, Todee, and Central Monrovia Health Districts respectively) is geared towards assessing the WASH and environmental health standards and practices of the following areas using the WASH FIT: Water, Sanitation, Healthcare Waste management, Hand Hygiene, Cleaning and Disinfection, Environmental Management and Energy and Facility Management.

Specific objectives:

The objective involves 3 areas;

i. **WASH and Environmental Health Standards and Practices** - To review the implementation of WASH in HCFs.

ii. **Provide Onsite Mentorship** - To review and identify gaps (individual and institutional) for onsite mentorship for WASH managers,

iii. **Report** - findings from the are shared for follow up activities and intervention

iv. **Update Database** - To collected WASH information that will enhance the database.

**Methodology**

Taking a risk-based approach, the three-days supervision and mentorship exercise was conducted in three health districts in Montserrado County and 4 targeted health facilities. The team comprised of WHO WASH, Montserrado County Health Team WASH Unit, and National Public Health Institute of Liberia (NPHIL)-Division of Environmental and Occupational Health (DEOH).

Facility Improvement Tool, the exercise proceeded in the form of a structural, administrative, and functional audits, which began with a meeting, discussion, and mentorship at the level of the
County health team followed by facilities identification for the supervision, team setup, and field travels. During the field visits, interviews are held with the facility Officer in Charge (OIC), sanitarians/janitors, and IPC/WASH focal person, in addition to mentorship, direct observation, and ward-based audit of records, and practices. The exercise at a selected facility is concluded with a session for feedback from both the facility's staff and the visiting team.

Results

During the month of July 2020, WHO collaborated with the Montserrado County Health Team/MoH and the NPHIL and technically supported a weekly WASH and Environmental Health Supervision and Mentorship in 3 health districts and 4 health care facilities in Montserrado County. During this exercise, a total of 16 HCWs were mentored in the WASH and environmental health standards and practices applying the WASH Facility Improvement Tool, to contribute towards ensuring patient and staff safety. The tool (WASH FIT), monitors essential and advanced indicators which allow for incremental improvement, and structure to aid countries toward meeting the Sustainable Development Goals (SDGs) 3 and 6, while at the same time contributing to SDGs indicators including gender mainstreaming. It operates on a red-light system (Red means bad, Yellow mean medium and green means good), and green is the point of interest; and was designed by the WHO partnership with the UNICEF, and is intended for health facilities and communities in low-and middle-income countries; of which Liberia is a part.

The domains of this tool were applied in the selected facilities; information gathered was transcribed (where bad=0, medium=1 and good=2 for each indicator) and interpreted (in Liberia's context) as illustrated by the below graphs and table.

Scores Interpretations

<table>
<thead>
<tr>
<th>No.</th>
<th>HCF Risk level</th>
<th>score</th>
<th>Red-light system</th>
<th>Require Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Very High Risk</td>
<td>0.00%-29.99%</td>
<td></td>
<td>Clearly a priority requiring very urgent attention</td>
</tr>
</tbody>
</table>
### Figure 1: Risk Score interpretations and required actions

<table>
<thead>
<tr>
<th></th>
<th>High Risk</th>
<th>30.0% - 59.99%</th>
<th>Clearly, a priority requiring urgent attention</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Low Risk</td>
<td>60.0% - 89.99%</td>
<td>Medium or long term priority requiring some attention</td>
</tr>
<tr>
<td>3</td>
<td>Very Low Risk</td>
<td>90.0% - 100.0%</td>
<td>Clearly not a priority, but require periodic monitoring and mentorship</td>
</tr>
</tbody>
</table>

**Water**

This domain has 4 essential and 11 advanced indicators that assess the availability, quality, and quantity of water at a given health facility. The Nyehn and Soniiwein Health Centers in Todee and Central Monrovia Health Districts performed the least (25.0% both for the essential indicators and 20.0% and 27.3 for advanced indicators, respectively) for the domain water. These facilities share similar challenges. They either do not have sources of water piped into their premises or their sources are affected by seasonality and are also irregularly treated. During times of intermittent water supplies to these health facilities, they turn to rely on the community's water sources (hand pumps), which have schedules for opening and closing during the day. As such, in addition to the issue of availability, the quantity of water is also hampered by this factor at these facilities. There are no drinking water stations at the Soniiwein Health Center for staff and patients, everyone had to buy sachet water if they needed to drink. The records of water treatment at these facilities before use are not available and therefore the quality of water could not be relied upon. On the other hand, Goba’s Town Clinic in Bong performed well (88.0% for essential indicators) and also shows (60.0% for advanced indicators). This facility located in the Todee District, rural Montserrado County ranks high in this parameter. See **Figure 1** scores interpretations and required actions, and **Figure 2** for HCF Scores for Water monitoring at the HCFs.
Figure 2: HCF Scores for Water monitoring at the HCFs in Montserrado Counties

Sanitation

The indicators of this domain are structured to assess the facility’s latrines and toilets system and their convenience (which includes a separation for males, females' visitors, inpatients, and outpatients) of use by female, male and people with disability. However, the least complying HCFs are Bromley and Soniiwein Health Centers, with the compliance scores of 30.0% and 33.3% for essential indicators, respectively while 50.0% and 37.5% were registered for advanced indicators. At the time of the assessment, Bromley has 1 latrine functioning and is used for both male and female patients, the staff latrines were not convenient for use. There are leakages in the roofs of the building including the side of the latrines. They were also not kept clean due to fewer numbers of janitorial staff coupled with little motivation. Like Bromley, the Soniiwein Health Center is undergoing a renovation, the latrines were closed at the time of the assessment, which is very inconvenient for all entering the facility. Please see Figure 1 for score interpretations and required actions, and Figure 3 for HFs compliance scores.
The indicators of this domain are structured to evaluating the facility's health care waste management and practices, which are intended to assure staff, patients, and public and environmental, including occupational health and safety. The Soniwein Health Center is the least performing HCF with a score of 25.0% (very high risk) for advanced indicators and requiring very urgent attention. This facility is located within the heart of the city (Monrovia), and serve a much larger population. However, its location has also restricted it from making some improvements in terms of waste management (unable to construct an onsite incinerator system) but rather depends on outsourcing the waste collection, again with on available budget line sustain such arrangement. The location the entity is situated was once a dumpsite for the general market, and therefore, the water quality remains unsafe for any kind of use except for flushing latrines.
All of the other facilities are in the range of 40%-75% for both essential and advanced indicators. The interpretation shows an urgent need for intervention. Proper health care waste management is a serious challenge to most health facilities, especially in rural areas. Therefore, these facilities require prompt attention to the level of risk posed by these conditions to patients, staff, and public safeties.

**Figure 4: Health Care Waste monitoring at the HCFs in Montserrado County**

**Facility Environment and cleaning and disinfection**

The Facility Environment and cleaning and disinfection is a combination of Environmental Management and Energy as per the old version of the WASH FIT. This combined version, however, appraises the facility in terms of standard method and practices facility environment and cleaning and disinfection during the normal workday and in emergency cases; which are intended to guarantee staff and patients safeties, now been advised for all times but with special emphasis during this COVID 19 Pandemic. Again, the least performing HCF is the Soniiwein Health Center which has a score of 25.0 % (very high risk) for the advanced indicators but performed much better (with a score of 71.4%) essential indicators. While Bromley also performed less in this domain, with a compliance score of 28.0% (also very high Risk) in the essential indicators ranking. The rest of the HCFs were above medium, which is commendable but needs continuous periodic supervision and mentorship.
Management

This domain is aimed at evaluating the facility WASH implementation and a dedicated budget for the sustenance including documentation of related activities and staff appraiser and motivation. These are intended to assure constant supply and availability of WASH consumable, motivations and training for staff, documentation of processes, procedures including management and staff commitments, which enhance staff and management

Figure 5: Facility Environment/Cleaning and Disinfection monitoring at the HCFs in Montserrado County

The NO Mask, No Service and clean environment campaign for adherence (patient and staff safety)
performances while at the same time increasing staff and hcf's morale. Goba’s Town Clinic and Nyehn Health Center in Todee Health District in Montserrado County scored the least 25.0 % for essential indicators both followed by Soniwein Health Center with the scored 37.5% and 35.7% for essential and advanced indicators respectively. Interestingly, Bromley Health Center scored the most (93.0%) for advanced. management domain The lack of dedicated budget for WASH activities poses a serious challenge to most health facilities of WASH most especially in clinics and health centers in the peri-urban and rural communities. Therefore, this lack of WASH budget requires prompt attention from higher-level Ministry of Health/NPHIL Managements to mitigate the level of risk posed by these conditions to patients, staff, and public safeties/program continuity; see below figure 6 for the HCFs compliance scores.

![Figure 6: Management monitoring at the HCFs in Montserrado County](image)

**Health Care Facilities (HCFs) WASH in HCF Compliance scores**

The below figure illustrates the individual facility compliance scores for adhering to WASH in HCF standards and practices applying the WASH FIT Methodology. Analytically, 54.5% (high risk) is the compliance score for all of the domains for the essential indicators at the monitored hcf's while 46.8% (high risk) represents the score for the advanced indicators.
Figure 7: Facility WASH in HCFs Compliance score for the HCFs Visited in Montserrado County

Recommendations and Areas to Consider

At the:

Facility level:
1. Create a safe space for holding health care waste before incineration or pickup
2. Minimize waste generation and promote proper segregation (especially point of generations
3. Institute and monitor the three bins system at all appropriate points
4. Appraise and motivate deserving staff
5. Monitor (OICs, WASH/IPC focal points, and supervisors) waste incineration especially sharps
6. Conduct regular in-house training for new staff
7. Set up WASH/IPC teams (for those that don’t have) with regular meetings and documentations

County-level:
1. County Health team to commence a periodic WASH supportive supervision, mentorship, and report
2. Established a WASH team at the facility level, and supervise regularly
3. Purchase and supply WASH-related consumables (color-coded waste bin, soap, detergents, etc.)
4. Lobby for incinerators construction and collection of health care waste for hcf's needing such support

5. Chlorination of HCF water points

6. Conduct periodic training for WASH staff

**National level;**
1. Provision of incinerators for needed hcf's through the CHTs
2. Provision of training for staff, in collaboration with CHT/and partners
3. Ensure dedicated budget for WASH at the facility level
4. Encourage appraiser and motivation for staff and deserving HCF
5. Conduct period monitoring and onsite mentoring alongside partners and CHT's
6. Support routine water point chlorination (for both communities and HCFs)
7. Household water treatment and safe storage, education awareness

**WHO**
1. Technically support CHTs, national for the implementation of WASH FIT in additional health facilities
2. Ensure the WHO field officers are orientated in the WASH FIT methodology
3. Aid with WASH-related supplies to needed facilities in hard to reach communities.

**Lessons Learnt**
1. Again, WASH FIT supervision and onsite mentorship increase the number of health worker skills and knowledge in WASH/IPC standards and practices; which increases patients' and staff safety, especially during this COVID 19 period.
2. The involvement of the health facility's staff, CHTs and other partners in the periodic monitoring exercise will improve WASH activities practices at the facility level
3. Routine monitoring and mentoring will promote incremental improvements at the HCFs

**Best Practices**
1. The NO MASK, NO ENTRY or NO SERVICE is highly observed at the assessed facilities, especially for this COVID 19 Pandemic
2. The CHT and NPHIL championing of WASH in HCF is commendable and result-driven
3. The eagerness (out of pocket procurement of WASH consumables) of the OIC and staff for WASH in HCF, in a resource constraint setting is impressive.

**Next steps**

**At Facility Level**
1. Continue to conduct periodic supervision and mentorship for HCWs at the facility levels for additional counties and HCFs
2. Water quality surveillance and chlorination for hcf's and communities
3. Education and awareness on HWTSS especially for flood and slum communities
4. Follow up action points or corrective actions recommended for HCFs

**At county level**
1. Continue the collaboration and joint monitoring and mentoring
2. Follow up action points or corrective actions recommended for HCFs

**At the level of WHO**
1. Ensure that the database captures indicators in the WASH FIT that are reflected in the SDGs, (3, and 6) and are aligned with the top task

Annex

**Participants, and Health Districts and Facilities Visit**

**St. Paul Health District**

The Mentors:
1. Quincy T. Goll- National Focus Person WHO-WASH- 0776077176
2. E. Jefferson Dahnlo-NPHIL-Health Care Waste Supervisor-0770617934
3. Lemu Tarpeh- MCHT/MoH-WASH Coordinator-0770022767

The Mentees
1. Alice Toegbaye – Acting OIC-0777930701
2. Amelia B. Gardia—WASH/IPC Lead – 0770156060
3. Sarah Borvah- Supervisor-0886382556

The supervision held in 1 health facilities:
1. Bromley Health Center (3 health care workers (HCWs) were mentored)

**Todee Health District**

The Mentors:
1. Quincy T. Goll- National Focus Person WHO-WASH- 0776077176
2. E. Jefferson Dahnlo-NPHIL-Health Care Waste Supervisor-0770617934
3. Lemu Tarpeh- MCHT/MoH-WASH Coordinator-0770022767

The Mentees:
1. Rita Parteh—WASH/IPC Lead—0777971433
2. George Sumo—member—08867440051
3. Zotamon P. Gonpu—Member—0886527370
4. Augustine A. Karmo—Member—0886592294
5. Samuel M. Kollie—Member—0886382086
6. Yassah Mulawah—member—0880031802
7. Selvester Horces—member—0888620853
8. Easter C. Saylee—
9. Jackson Thomas—Focal Point WASH/IPC—0880659845
10. Annie G. Sumo—Member—0886529506
11. Lincoln D. Smoker—Member—0880538373
12. Rufus Johnson—Member—0775343350
13. Mary T. Kwiwalazu—OIC—

The supervision and mentorship covered 2 health facilities namely:

1. Goba's Town Clinic (5 HCWs were mentored)
2. Nyehn Health Center (5 HCWs were mentored)

**Central Monrovia Health District**

The Mentors:
1. Quincy T. Goll- National Focus Person WHO-WASH- 0776077176
2. E. Jefferson Dahnlo-NPHIL-Health Care Waste Supervisor-0770617934
3. Lemu Tarpeh- MCHT/MoH-WASH Coordinator-0770022767

The Mentees:
1. Irene Sherman – OIC—0777988024 (was not well at the time of engagement)
2. Elizabeth D. Japloh—WASH/IPC Lead – (no Number is given)
3. Jefferson Gray- Waste Manager- (no number is given also)
4. Fatu Boyce Cleaner
The supervision held in 1 health facilities:

1. Soniiwein Health Center (3 health care workers (HCWs) were mentored)

**Pictographic**

- Keep the Physical distance while providing the supervision and mentorship
- Ward-based inspection with emphasis on Hygiene and Health care waste management
- Water points inspection with emphasis on environmental cleaning and chlorination