

Overcoming barriers to WASH in Health Care Facilities to meet SDGs

An assessment of Water, Sanitation and Hygiene (WASH) in Health Care Facilities (HCF) in six district hospitals in Ghana has shown a need to modify the operation and maintenance of hospital-based WASH systems.

“Majority of healthcare facilities will require onsite treatment in order to meet safe drinking water guidelines,” observes Habib Yakubu, Senior Public Health Program Associate of the Center for Global Safe WASH (CGSW) of Rollins School of Public Health at Emory University, U.S.A.

This will also have long term implications including the attainment of the 2015 Sustainable Development Goals, which include a target to achieve “universal access to safe drinking water in health facilities by 2030” as captured in Goal 6.

This was a key issue raised at the fifty-third edition of the National Level Learning Alliance Platform (NLLAP 53) which was held on Thursday 10th December, 2015 at the Erata Hotel in Accra. This edition was themed: *“Water, Sanitation and Hygiene in Health Care Facilities in Ghana: The Present Conditions and Programs to Meet the Sustainable Development Goal.”* This edition hosted the Center for Global Safe WASH (CGSW) of Rollins School of Public Health at Emory University, U.S.A with the support of the General Electric Foundation and in collaboration with WaterAid Ghana and the Resource Centre Network (RCN). This communiqué is meant to share key highlights of NLLAP 53.

The Center for Global Safe WASH led the discussions with the objective of reflecting on the new Sustainable Development Goal of WASH in Healthcare facilities and the new WASH tools in development for the sector; share results and discuss WASH conditions in Healthcare facilities; share programmes and plans of WaterAid Ghana in respect to WASH and Health.

Germ in six hospital water systems

Consistent supply of safe water in healthcare facilities is required for a variety of medical, hygiene, and drinking purposes. The World Health Organisation (WHO) has made universal access to drinking water, sanitation, and hygiene in healthcare facilities a sustainable development goal; however, most HCFs in low-resource countries struggle to meet this basic requirement.

Against this backdrop, the CGSW at Emory University conducted a multi-year, multi-country study to assess water access, use, and quality in 10 HCFs in Ghana and Honduras and identify key factors that determine sustainable Operation and Maintenance of on-site water treatment systems (WTS) and provision of safe water.

Presenting an aspect of the study on *“The WASH Crisis in Healthcare Facilities in Low-Income Countries: The Challenges and Sustainable Development Goal”* Yakubu said “Since 2011, the Center for Global Safe WASH at Emory has assessed water, sanitation and hygiene in healthcare facilities (HCFs) in low-income countries.”

In Ghana, six healthcare facilities, namely Apam, Axim, Bole, Kete Krachi, Kintampo, and Mampong District Hospitals were studied.

In another presentation titled: *“The Sustainability of Water Treatment Systems in Healthcare Facilities in Ghana and the Water Infrastructure and Water Quality Which Contribute to Sustainability,”* Marissa Gallegos, MDP, Public Health Program Associate at Emory University, explained what the research team discovered in Ghana's six district hospitals that were surveyed.

With photographs, she illustrated that hospitals in Ghana are busy, crowded and chaotic places that are home to unclean floors and surfaces, as well as poor infrastructure.

“While hospitals in Ghana have access to an improved water source, hospitals do not have consistent water flowing from the taps 100% of the time.” This is so because hospitals on average experienced water shortages once a week. The shortages were, in turn, attributable to seasonal changes and frequent power outages of varying durations.

Besides shortages, Gallegos said there were access issues relating to water infrastructure. Particularly, taps were often non-existent, non-functional or locked.

When the team investigated further, it found that staff of health care facilities had better access to hand washing facilities and soap than patients. The implication is that

patient hand washing facilities are needed in order to increase patient hygiene practices and decrease the potential for hospital-acquired infections, the team suggested.

With regards to quality, Gallegos presented that CGSW tested water samples for total Coliforms, *E.coli*, *Pseudomonas aeruginosa*, turbidity, and free as well as total chlorine.

The team observed positive change in water quality overtime while percentage of samples that met standards improved. “In Ghana adherence to chlorine application protocols varied by hospital but overall levels were found to be below due to issues of chlorine supply,” she reported.

Besides, “Water quality results varied by hospital. Only one hospital was able to achieve consistent access to water, which met WHO guidelines.”

More specifically, the team documented that:

- ✓ Raw water was more contaminated than the filtered water and the tap water. However, there was a rise in total coliforms in the water storage containers.
- ✓ Raw water was more contaminated with *E. coli* than the filtered water and recontamination with faecal bacteria was occasional.
- ✓ *Pseudomonas aeruginosa* was present in raw or filtered water but not in large amounts. Noticeable concentrations were found in tap water and Veronica Bucket water.
- ✓ Water stored in veronica buckets within hospital wards are highly contaminated with *Pseudomonas aeruginosa*.

The veronica bucket conundrum

The CGSW found contamination in Veronica buckets at six hospital sites in Ghana. Buckets were used at all six hospital sites and were rarely cleaned.

But after Veronica bucket cleaning protocol and management system was implemented, the presence of total coliforms, *E. coli*, and *Pseudomonas aeruginosa* were

not found in 94% of samples collected from veronica buckets.

“For this reason, it is recommended that the use of veronica buckets should be minimized and ultimately discontinued,” the team recommended, emphasising that “Water quality was better in the hospitals that did not use Veronica buckets.”

Meanwhile, during the study, the team also established a complexity of water use in healthcare facilities as multiple populations have different needs. Accessing the HCFs are medical staff such as nurses, surgeons, doctors, as well as auxiliary staff such as cleaners, kitchen staff, caregivers and their families, and patients.

These constituencies use water for drinking, cooking, personal hygiene, cleaning, and laundry.

Water is also used in medical activities, including laboratory analyses, surgery, nebulizers, reconstitution of medications, drinking water, hand hygiene, bathing water, washing surfaces, etc.

Way forward

After half a day of deliberations, participants agreed that taking the following steps will help address bottlenecks pertaining to HCFs:

- ✓ Consistent access to water should be seriously considered a first priority in order to achieve basic hygiene and sanitation within healthcare facilities.
- ✓ Hospitals that suffer from water scarcity and have veronica buckets for water provision could consider implementing veronica bucket cleaning protocols and adding chlorine to the veronica buckets in order to improve water quality.
- ✓ Systems should be established for guarantee availability, maintenance, and functionality of taps as well as soap provision to sustain a safe hospital environment.
- ✓ More research should be done to contribute to the evidence-base for promoting safe water in healthcare facilities as a priority within the global water sector.

The NLLAP is a WASH sector multi stakeholder platform with the overall goal of improving sector learning and dialogue. It is hosted by the Ghana WASH Resource Centre Network (RCN). The platform offers learning and sharing opportunity for sector players as one of the practical approaches to improving sector engagements/sharing with the long term aim of achieving a knowledge driven WASH sector that delivers quality and sustainable services in Ghana. NLLAP meetings take place on the last Thursday of every month and opened to all interested parties. The discussions of each NLLAP meeting are summarized and shared with the wider WASH community. The topics of upcoming meetings are decided on by the RCN secretariat and a list of upcoming meetings can be found on the RCN website www.washghana.net.

If you are interested to propose a topic for a meeting please contact us on,

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