Summary of the E-Discussion on WASH in Health Facilities

21. November – 15. December 2012

BACKGROUND

Many health facilities in developing countries do not have adequate facilities for water supply and sanitation. Actually, water supply, sanitation and hygiene (WASH) in health facilities is not much on the radar screen of the development community and governments, because the WASH-related MDG targets have been formulated for the household level whereas other facilities (e.g. education and health) where people need access to WASH have not been included.

Health facilities do have very specific WASH needs, because they are highly frequented by people that are potentially exposed to the particular infective wastes produced in health facilities. Many patients have disabilities or are limited in their mobility and need WASH facilities that are easy to access. On the other hand, health facilities have also the potential to play an important role in improving WASH in the entire community, e.g. by contributing to the promotion of hygiene behaviour change.

WASH in health facilities is therefore a relevant issue for many of SDC's water and health programmes. Specific guidance on how to consider the specificities of WASH in health facilities would be helpful for programme staff when planning and implementing programmes. As currently, no such guidance exists within SDC, an e-discussion with members of SDC's networks for water (RésEAU) and health was organised for creating a common understanding on the issue and to provide guidance for planning and implementation. The discussion took place from November 21 to December 14 2012 on the discussion platform "Dgroups".

OBJECTIVES AND APPROACH

The **objectives** of the discussion were:

- To establish a **basic understanding on the needs** regarding water, sanitation and hygiene (WASH) and recommended practices in Health Facilities
- To **facilitate access of field staff** involved in planning and implementation of programs for WASH in Health Facilities **to experiences of other programs**, relevant guidance documents and expert contacts
- To **assess needs for further support and advice of field staff** involved in planning and implementation of programs for WASH in Health Facilities in low resource contexts

The discussion was divided into three phases:

In order to get an overview of the topic and to tap the expertise of the participants, **Phase I** assessed the **specific needs for WASH in health facilities** and the **potential interplay of the health facilities and the community?**

Based on the outcomes of the first phase, **Phase II** took a closer look at the health facility itself and asked the **participants to share their experience** regarding

- Appropriate methodologies to **assess the current WASH situation and specific needs**,

- the selection and implementation of **adequate technologies and infrastructure**, and
- the introduction of **appropriate management models** in health facilities.

In **Phase III**, the expert community was asked to participate in a kind of **"market place"** with the idea of **collecting existing expert knowledge and linking it to the specific demand** in the field. The participants were therefore asked to indicate their specific expertise on the topic "WASH in Health Facilities" which they could "sell" to the other community members and also to specify the challenges they face in their work on the topic "WASH in Health Facilities" and for which they would like to "buy" guidance and solutions from the community.

Most contributions were related either to Africa or Central Asia and about one third of the inputs came from SDC (see table below).

Organisation	**Region**	**Contributions**
SDC	Kyrgyz Republic, Tanzania, USA, Pakistan, Tchad, Grands Lacs, Tajikistan, Moldova, Central America	17
NGO	Senegal, Togo, Haiti, Burkina Faso, Niger, Switzerland	14
University/Research Institute	Burundi, Switzerland	7
Consultancy	Switzerland	3
Other	World, Uzbekistan, Germany, Colombia	7
Total		**48**

SUMMARY

To put it in a nutshell: *All the contributors agreed upon the significance of water, sanitation and hygiene in health facilities in order to protect the **wellbeing of staff, patients and visitors**, to **prevent epidemics** and to act as a **role model for the whole community***. This might sound obvious, but the reality unfortunately looks different:

- 50% of the rural health centers in the Grands Lacs region have no access to basic water and sanitation services.
- In Togo, biomedical wastes are collected but thrown into latrines in the absence of cesspools or incinerators.
- A small assessment conducted on hygienic practices of health staff in health centers in the Grands Lacs region showed no significant difference in the hygiene behavior of health workers with and without having access to running water.

These examples illustrate not only the necessity of health facility specific solutions for WASH, but also illustrate that there is need for action on several levels: i) reliable **supply of water and sanitation services**, ii) the **provision, operation and maintenance of adequate infrastructure** and iii) **education and training of staff, patients and visitors** in combination with the outreach to the community.

Early in the discussion, it was suggested to agree upon a **classification for health facilities**

- **Hospital**: offer specialized treatments and admit inpatients for overnight stays
- **Clinic** (or outpatient clinic or ambulatory care clinic): health care facility that is primarily devoted to the care of outpatients. Clinics can be privately operated or publicly managed and funded, and typically cover the primary health care needs of populations in local communities. At the level of clinics, this might even include a one-doctor or one-nurse ambulatory service, or even a dentist
- **Outpatient basis**: patients stay occurs on a single calendar day (e.g. blood tests, endoscopy and biopsy procedures of superficial organs)

One suggestion was to give health facilities the additional name or status of "Hygiene Center" which should be rightly addressed at policy level to **give these institutions the weight they deserve on advocacy level**. It was also stated that operation and maintenance is not a priority of Health Committees and other decision makers. Health facilities often see their capacity reduced due to budget constraints (priority for medicine), lack of government funds (reduction of health budget due to international pressure), not having the necessary staff (health and maintenance) and concentrating the efforts of the existing staff in curing (health staff) and not preventing illnesses (O&M staff and hygiene promoters). However, another statement blamed corruption and wilful malpractice for lack of success at scale.

Costs are an issue even though some of the interventions we are talking about (boreholes, latrines, water storage, incinerators, wells, septic tanks...) are not that expensive. **Cost per beneficiary when calculated is extremely low** if we consider the population the health centre normally covers. According to the experience of Swiss TPH in Haiti, analysis showed that improving WatSan systems in health centres could cost around 2USD/beneficiary or less (considering as beneficiaries the health centre coverage population).

Also **water and sanitation being a human right** was brought up. It should be present in all spheres of people's lives as an additional argument that communities all over the world can use and invoke and make in order to demand a proper attention to and prioritization of access to WASH in health centers. In order to spread the message, a Colombian-based practitioner offered to do a special TV broadcast with the most representative practices in water and sanitation (to be presented at World Urban Forum in 2014, Medellin)

KEY QUESTIONS PHASE I

1. What are the needs for water, sanitation and hygiene in health facilities?

Most quotes regarding the specific needs for WASH in health facilities covered the **lack of services, appropriate infrastructure and management models**.

It was stated that improved hygiene practices at health facilities are essential for the **cut of the transmission routes** of water and sanitation related diseases with staff (health care, facility management) as a priority target (access, training) because they act as vector of diseases.

The following needs and issues in the four areas water, sanitation, solid waste and hygiene were identified:

Clean water: - Cleaning of wards, linen, medical equipment, toilets - Food preparation - Cleaning of patients - Maternity ward - Hand washing of personnel - Re-hydration - Surgical processes	**Sanitation**: - Proper disposal of excreta in order to prevent outbreaks of diseases - Adequate sanitation infrastructure for special needs of various groups (disabled, pregnant women, elderly)
Solid waste management: - Lack of adequate incinerators - Lack of awareness - Small quantities of contagious waste contaminate the large fraction of "unproblematic" waste - Dumping of medical waste close to the buildings - Solar incinerators as a possibility - Need for sharps pits	**Hygiene**: - Ensure cleanliness of environment, equipment and staff (training as well as provision of soap, towels, disinfectant, gloves, …) - Access to reliable source of energy to maintain operation of refrigerators/incubators (food, medication, bacteriological tests) - Development of water safety plans for health centers to determine the quality and sanitary conditions of the service being delivered to patients

Inputs on technologies were mainly focused on clean water. Centralised service management options for the **provision of clean water** might have a better chance than in dispersed settlements and should therefore be taken into consideration. Rainwater harvesting was given as an options as well as chlorinators (Antenna/WATA/Acquin Solution). However, the production of the adequate quantity (for use in maternity) of chlorine solution if often not possible with the small devices and the bigger is too expensive. Reagents to control chlorine concentration are not available locally and the expiry date is short → adapted device for health centers is needed. Also the control of the chlorine concentration might be a challenge due to lack of training.

In areas with an existing distribution grid for water, the irregular provision is a problem and **sufficient storage capacity** is therefore needed.

2. What are the potentials of health facilities in improving water, sanitation and hygiene in the communities?

The tenor of the discussion about question 2 was: health facilities are "messengers" of health messages, information and facts. Their formal responsibility in health assessment and evaluation makes them key players in community development and sustainability. They can improve (or diminish) the community resilience and capacity through their work.

Health facilities and their employees have a high reputation in communities and their voice would be heard. But with great power comes great responsibility. It is therefore important to **educate/train staff in order to disseminate knowledge** and demonstrate model behaviour regarding hygiene. Health facilities might have a high potential to trigger behaviour change not only in patients but also in visitors and staff and to **raise awareness about different needs** of

different social groups (gender specificities, aged, disabled etc.). However, the transmission from the clinical, somehow artificial environment in the health center into everyday life at home might not be as easy as it seems at first sight.

Vaccination campaigns and health messages might be an opportunity to **communicate also hygiene messages**. Providing the staff involved with Information Education Communication (IEC) material is, however, a prerequisite.

Often, the promotion of WASH works, but only if initiated by NGOs or external partners. The effect could be big if supported by government and donors. **Enforce the policy dialogue** with health authorities in this regard, as their facilities have example characters at the local level. Health center could also provide a lab to contribute to the analysis of the water samples from the village, thus strengthening the bond between health facility and authorities.

Examples

A great number of examples of good practices and challenges have been described. They will hopefully form the base for more to come, ideally with documentation (if available)

Good practices

- In **Pakistan**, a National programme of health promotion under which each and every health facility is having number of Lady Health Workers, who are **promoting health and hygiene education in the communities** through door to door approach. Such types of programme need to be supported by building the capacity of these social mobilizers and providing them best Information Education Communication (IEC) material on WASH for promotion in the communities.

- In **Ghana**, the International Rainwater Harvesting Alliance (IRHA) is working in two rural health centers. They collect rainwater in **rainwater tanks**, and it will be used mainly to improve the hygiene. The water is being treated an Antenna kit for water treatment, which can be used for **purification of water** (if it is used as a drinkable water), and for hygiene purposes in the Centre. Blocks of 3 **urine diverting dry toilets** (UDDT; 1 toilet for the staff only; 1 for patients women; the third, for patients men) are being built and they plan to train the staff and to introduce very simple kind of waste segregation.

- In **Burundi**, TdH is currently testing a province-wide household competition on hygienic conditions. A 9-month **campaign including radio spots, door-to-door visits of households** by Community Health Workers with image box, activities conducted by Health Committees, activities conducted by Hygiene Committees at the colline-level, aims at motivating households to improve their hygienic conditions, offering winning households and collines a price for their efforts. Results are not yet documented, but participation showed a great interest. The remaining challenge being how to measure and capture effects on long-term behaviour change of such intervention.

- In **Benin**, HELVETAS has developed a concept of transformation of open well into a **protected well with a foot pump**. This pump had 2 purposes: providing water to communities at the well and supplying a water tower in the health center (and schools). The users are then pumping for themselves but also for the community.

Challenges

- **Grands Lacs**: Availability of water sources often has not been taken into consideration when health centers were built → 50% of the rural health centers have **no access to basic water and sanitation** services. As most water sources are situated at the bottoms of the hills, the infrastructure needed to pump the water up to the health facilities and communities on the hills are technologically challenging (e.g. solar pumping systems) and costly (e.g. electric pumping systems). The legal partners in charge of maintaining water systems in rural areas are included and trained for the maintenance of those systems, as well as local water committees, but the challenges remain great. The infrastructures will be handed over to the health authorities when finished, and their (financial) **sustainability will depend on the Ministry of Health's capacity and willingness to incorporate those costs**. Capacity building at local level will mainly allow small maintenance procedures and detection of larger issues, to be reported at a higher level.

- In **Tajikistan**, standards are clear from the demand side on water, sanitation and hygiene in health facilities. However, it's not at all the case in terms of supply as per different assessments carried by members of the Tajikistan Water Supply and Sanitation Network in different parts of the country. The water supply and sanitation infrastructure in health facilities (if exists) is not responding even to the sphere standards. In terms of water supply and water disposal, **health facilities are fully dependent on water service providers (who's performance is often very poor)** on both quality and quantity sides of the service. Such vulnerability has further aggravated the situation.

KEY QUESTIONS PHASE II

The responses on the three questions were diverse and were filled with very valuable information. It would go far beyond the scope of this summary to include all the statements and we therefore explicitly **refer to the original inputs** (www.dgroups.org) for information on certain baseline studies, assessment criteria and the implementation of technologies.

The conclusion of the second discussion phase on WASH in Health Facilities might be: we do not have to reinvent the wheel.
Tools for the assessment of the current WASH situation exist and adequate technologies have been introduced in health centers before. There is, however, a great **potential for the exchange of information** within and between the different sections and institutions of the RésEAU and the Health Network and a joint approach to develop general guidelines has been proposed.

The assessment of the current WASH situation and the specific needs:

- Terre de hommes **(Tdh) developed a specific assessment tool for WASH in Health Facilities** and **SDC assessed 81 health facilities in Pakistan**. In the case of Swiss TPH/SDC in the Great Lakes region, the assessment of needs has been conducted primarily by an external consultant. On the other hand we have SDC Kyrgyzstan and SCD Moldova who are considering conducting an assessment. The exchange of information concerning methodology and outcomes would probably be highly appreciated. Swiss TPH compiled a **detailed list of criteria for the assessment and the selection of technologies** which might be developed further.

- Tdh **shares the results of their assessment with the health authorities and draft an action plan** with them according to their priorities (including action plan for implementation and agreement with health authorities describing responsibilities). However, Tdh also mentions the risk of biased surveys due to withheld information by key informants.
- The **use of the water and sanitation facilities by the neighboring population** is an issue which has to be considered in order to plan capacities (points of access to safe water and latrines).

The selection of adequate technologies and infrastructure:

- **Complete treatment is of great importance** due to the elevated risk of the faeces being highly contagious.
- The description of technologies for the production of safe water was limited to **chlorination, ceramic filters and filtration/UV**.
- Chlorination of water is an easy technology, provided personnel have been trained to properly prepare correct solutions (WATA, tablets, granules, …). **Procedures, known from Cholera Treatment Centres, can be followed**. During a Cholera epidemic the WASH expert has a key function in producing drinking water (1 ppm Free Residual Chlorine (FRC)), but also the 3 standard FRC solutions (0.05 %, 0.2% and 2%) for washing surfaces, rinsing kitchen materials, hand washing, washing clothes, sanitizing dead bodies, etc. There are different devices on the market for the production of FRC solutions by using kitchen salt.
- Facilities with chlorinated water (incl. soap) should be available in each room for handwashing and disinfection of materials. A **tank of sufficient size** could provide water in the case the water source is damaged (at least for a couple of days). In Togo, hand washing facilities and ceramic filters are present but feature some weaknesses (taps break, low flow rate, position of tap).
- HELVETAS Swiss Intercooperation decided to install a **solar mini water treatment system** (mini système d'eau) which also supplies parts of the center with electric energy. Part of the energy is being sold for mobile device recharge and its **revenue used for the maintenance of the system**.
- **Rainwater harvesting and its storage** has been discussed (and questioned). Storage seems to be possible for a period of several months and can therefore also be considered as a solution in regions with very seasonal rainfall.

The introduction of appropriate management models:

- SDC funded health projects in Tajikistan are contributing to improve management capacities of health care workers via **the development of annual business plans**. This exercise encourages primary health care managers to analyse, plan and calculate activities to ensure appropriate functioning of the respective facilities. In Uzbekistan, schools and health facilities in two regions are provided with a set of **interactive methodology kits** on hygiene and sanitation, hoping to sensitize health officials for the importance of WASH.
- For **financial and operational sustainability** of WASH services, Swiss TPH states the example of Burundi where the "right for water" is often misconceived as the right for

"free" water and the **collection of water fees by the maintenance committees therefore is a challenge**. Health authorities and the rural hydraulic agency work closely together and the project is funding a position within this agency, who will further **train members of the committees/associations at the community level**. Two problems are endangering a further participatory process: i) the low level of literacy and accounting capacity and, ii) the people's fear of taking decisions or questioning local political leaders.

- Especially **in the African context**, responsibility for the management of certain areas within the health system is often taken by **community committees**. Their involvement in the planning of WASH structures and hygiene promotion **enhances their sense of ownership and builds their conscious understanding** about the importance of hygiene (learning by doing principle). Interestingly enough that in the cases described **in Central Asia, governmental organisations are held responsible** to a much higher extent. This will have to be considered when planning stakeholder involvement. A competition for the best hygiene conditions among health facilities, as proposed by one participant, might therefore not trigger the same enthusiasm in different countries/regions.
- Activities related to operation and maintenance of WASH **need to be integrated into daily routine** of the health center in order to not compete with the core business: the curing and attending of in- and out-patients. Also health risks deriving from cultural practices have to be considered. An example to mention here is the handling of placentas and surgically removed body parts which in Senegal and Guinea might be collected by family members.
- During a Cholera epidemic, the **person assigned to WASH supervises** hygiene promoters, sprayers, chlorination person, drinking water person, kitchen personnel, sanitation personnel, guards etc. Integrating these responsibilities into health centers with very limited funds might be a challenge. Tdh supports the health authorities in the identification of such persons who will then be responsible for all the health centers in the district.

KEY QUESTIONS PHASE III

The response to the call for offering expertise and asking for support was rather meager.

Carole de Bazignan from **Antenna Technologies Foundation** in Geneva commented on Antenna's chlorination device WATA, which was stated by several contributors. Some users mentioned the fact that the Standard WATA did not allow to produce enough chlorine (1L/hour at 6g/L) and the Maxi WATA was too expensive. Also the limited shelf-life of the quality control kids was noted. Carole informed that Antenna is in the process of developing a Midi WATA which is of intermediate size and that they are **looking for organisations** willing to partner with them to produce the quality control reagents locally. Organisations interested in partnering with Antenna **for the tests of the WATA kits and/or for producing reagents**, are welcome to contact Carole at cdebazignan@antenna.ch. They can **provide the WATA kits as well as any required training support and in return they ask for regular feedback** according to a testing protocol which Antenna will provide.

Petra Kohler from the **Interdisciplinary Centre for Gender Studies** ICFG (University of Berne) referred to the importance of **appropriate methods for eliciting information on different needs** and priorities of various user groups in health centres (patients, staff, visitors). To ensure the sanitation facilities actually meet their requirements (e.g. vulnerable and disabled persons,

small children, elderly, and pregnant women). ICFG currently **assesses the applicability of three different methods to collect sensitive information** (e.g., sanitation habits, menstrual hygiene). The methods were applied in high schools and low-income urban settlements but **could easily be adapted to the context of health centres**. ICFG is now analyzing the results and they would be happy to share their findings and discuss possible applications in the field (petra.kohler@izfg.unibe.ch).

SDC programmes in Kyrgyzstan, Tajikistan and Moldova, who are about to develop programs involving WASH in health facilities, already indicated a **demand for knowledge exchange**. Use of online collaboration and the ralisation of regional and global workshops with included site visits will be of great help.

CONTACTS

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RESOURCES:

General guidelines:

- Public Health Engineering MSF: http://www.refbooks.msf.org/MSF_Docs/En/MSFdocMenu_en.htm
- Engineering in Emergencies - A practical guide for relief workers, Edited by Jan Davis and Robert Lambert
- Essential Environmental Health Standards in Health Care, WHO: http://www.who.int/water_sanitation_health/hygiene/settings/ehs_hc/en/index.html
- Hand hygiene in outpatient care, home-based care and long-term care facilities, WHO: http://www.who.int/gpsc/5may/EN_GPSC1_PSP_HH_Outpatient_care/en/index.html
- The sanitation problem – What can and should the health sector do?, WaterAid: http://www.wateraid.org/documents/plugin_documents/the_sanitation_problem__what_can_and_should_the_health_sector_do_1.pdf

Solid waste management:

- De Montfort waste incinerator: http://www.mw-incinerator.info/en/201_guidelines.html
- Managing Health Care Waste Disposal: Guidelines on How to Construct, Use, and Maintain a Waste Disposal Unit; WHO, IT Power India, PATH: http://www.path.org/publications/detail.php?i=1352
- Health care waste management rapid assessment tool, WHO: www.who.int/injection_safety/.../Healthcarewastemanagementtool.xls

Drinking water:

- WHO Guidelines for cholera control: http://whqlibdoc.who.int/publications/1993/924154449X.pdf
- Cholera outbreak guidelines OXFAM: http://policy-practice.oxfam.org.uk/publications/cholera-outbreak-guidelines-preparedness-prevention-and-control-237172
- Cholera Kit – Medical Supply Guidelines: http://haiti.mphise.net/cdc-msf-cholera-kit-medical-supplies-guidelines-english-and-french
- Chlorine disinfection, CAWST: http://www.cawst.org/assets/File/chlorine.pdf
- Local production of sodium hypochlorite (WATA technology): http://www.antenna.ch/en/research/safe-water

Supporting documents

- B. A. Alex-Hart and P. I. Opara, 2011, Handwashing Practices amongst Health Workers in a Teaching Hospital, American Journal of Infectious Diseases: http://thescipub.com/abstract/10.3844/ajidsp.2011.8.15