WASH in HCF Community of Practice Event

Core Elements of Operations and Maintenance for WASH in HCF: A Discussion on Sustainability

Wednesday, April 20 | 8:30AM – 10:00 AM ET (NYC)

Ensuring the sustainability of WASH services in healthcare facilities will require strong operation & maintenance systems. Join us for a Community of Practice discussion on the core elements of O&M, including planning, personnel, and budgeting.

Simultaneous interpretation available in French and Spanish

This Community of Practice is an action-oriented learning platform that brings together the WASH and health communities to focus on policy, evidence, and practice in WASH in HCF.

- **CONNECT** partners
- **SHARE** experiences
- Encourage groups to **ACT**
1. WASH is a fundamental prerequisite for quality care within a healthcare facility and there cannot be effective infection prevention and control without adequate WASH.

2. WASH in healthcare facilities is a solvable issue and will require multiple systems, sectors, and stakeholders to work together to see sustainable improvements.

3. The Community of Practice is open to all who seek to learn and share about WASH in healthcare facilities. We welcome all and respect the diversity of perspectives who participate.
The Vatican’s WASH in Healthcare Facilities Initiative

The Dicastery for Promoting Integral Human Development organized an assessment of 150 HCF in 23 countries last year, calling together Catholic and non-Catholic partners alike to support improvements.

Daughters of Charity, CMMB, CRS, Caritas, CHA, WEFTA, Providence Health and more have identified facilities where they can help address gaps.
An estimated US$6.5 - $9.6 billion from 2021 to 2030 is needed to achieve full coverage of basic WASH and waste services in public healthcare facilities in the 46 Least Developed Countries (inclusive of capital investment and O&M)
The 2\textsuperscript{nd} Edition of the WASH FIT Tool (WASH FIT 2.0) will be published next week.

This updated manual includes additional recommendations for implementing in new settings like tertiary hospitals, considerations for cross-cutting issues like gender, equity and climate, and greater emphasis on prevention.

**Launch Webinar:**
26 April 2022 @ 7:00AM ET/13:00 CET
Overview of Operations & Maintenance for WASH in Healthcare Facilities
What is “operations and maintenance”? 

• Routine or periodic tasks required to keep a process or system functioning according to performance requirements and to prevent delays, repairs or downtime (Sustainable Sanitation and Water Management)

• Includes regular maintenance, repairs, checks and adjustments, as well as related financial, human, and institutional resources
O&M for Personal Care

**Teeth**
- Brush Teeth Twice a day
- Flossing

**Hands**
- Wash hands at appropriate times

**Clothes**
- Replace button
- Resole shoes

**Body**
- Eat nutrition foods
- Exercise
- Taking medication

**Mind**
- Attend Webinar
- Learn to use smart art
O&M in Healthcare Facilities

Water
- Regular testing and monitoring of water quality

Hygiene
- Handwashing stations are available and functional

Sanitation
- Emptying and disposal of fecal sludge from a septic tank

Waste Management
- Cleaning and maintenance of incinerators

Cleaning
- PPE is available for cleaning and waste management
Why the emphasis on O&M?

• Without O&M, all infrastructure will eventually stop working
• Badly maintained WASH facilities often cause an even bigger health risk
• O&M commonly cited as a leading factor in the breakdown of WASH services, including in HCF settings
• An assessment of enabling environment for WASH in HCF in ESA found that institutional arrangements for O&M had the weakest score
  • 13/19 countries indicated there was no national O&M plan for HCFs
  • Study cited limited financing, human capacity, inadequate policies, and lack of coordination (UNICEF)
• O&M is recognized as a cost-effective investment (Whinnery J)
• New construction is prioritized over operation and maintenance
O&M by Facility Size

- Smaller Primary and secondary facilities usually have basic needs, but often less resources
  - Water, Sanitation, Hygiene, and Waste Management infrastructure
  - No dedicated O&M staff
  - Financed through local government, civil society and communities themselves

- Larger Tertiary facilities usually have more complex O&M needs and dedicated staff and resources
  - In-patient services
  - Operating room ventilation
  - Surgical equipment processing
  - Environmental health personnel
  - Financed through regional and national government
Stakeholder Involvement in O&M

MoH – All levels
- Funding
- Technical expertise
- Training
- Maintenance
- Monitoring and oversight

Municipalities
- Funding
- Technical Expertise
- Routine maintenance

Communities
- Included patients
- Funding
- Labor

Private sector
- Construction
- Repairs
- Maintenance
  - Cleaning Operations
  - Waste Management
  - Inspections

Civil Society
- Funding
- Technical Expertise
- Advocacy

WASH in Healthcare Facilities Initiative
O&M Throughout the Health System

• National (ex. National Ministry of Health)
  • Budget allocation
  • Oversight

• Subnational (ex. District)
  • Budget requests/allocations
  • Staff training
  • Oversight
  • May have expert teams for repairs

• Facility level
  • Budget requests
  • Staff training
  • Routine and preventative maintenance
The financing of O&M is often overlooked in budget allocation. Cost-sharing of O&M and the mechanisms by which money is allocated is an important discussion among the WASH and health sector partners. Each subnational team/sector has their own priorities. One example of a mechanism to support long term O&M through existing health system monitoring systems is results-based financing, which has been used in countries like Uganda to strengthen WASH systems in HCF and pay for ongoing costs.
Example: Guatemala HCF Management Structure

- Ministry of Health and Social Welfare
- Vice ministry
- Hospitals
  - National
  - Regional
- Health Area
  - Comprehensive Maternity Centers (CAIMI)
  - Clinics
  - Primary Care Centers (CAP)
  - Etc.
Example: Guatemala HCF O&M Financing Structure

- Ministry of Health and Social Welfare
- Vice Ministry
- Hospitals
- Health Area (O&M) + Municipality (Development Council - Infrastructure) + Communities + Civil Society (NGOs) + Ministry of Defense
- Comprehensive Maternity Centers (CAIMI)
- Clinics
- Primary Care Centers (CAP)
- Etc.
What is required to plan and execute O&M at the facility level?

- Development of an O&M plan with stakeholders
- Routine preventative maintenance
- Spare parts
- Innovations (how to we make HCF staff lives easier)
- Life cycle costs
- Inclusive O&M

What Human resources are needed to execute O&M?

- Technical skill-building Ex. Changing a faucet gasket
- Soft skill-building Ex. Procuring a faucet gasket
- Outsourcing Ex. Cleaning contractor
- Communication and engagement Ex. Budget requests and Advocacy

Budgeting

- Developing a budget
- Budget requests
- Advocating for budget allocations

Key O&M Considerations
Example: Guatemala HCF Management Structure

Guidance
- Frameworks for O&M
- Policies and guidelines
- Inclusive O&M

Monitoring
- MOH assessments
- Community scorecards

Community engagement
- Feedback
- Awareness raising on use of systems
O&M Planning for WASH in Healthcare Facilities
How is O&M for HCF different from communities or schools?

• Technology/Infrastructure: Varies among HCF’s as well as communities or schools – not usually determined by whether we are dealing with school, community or healthcare facility

• Exception – HCF’s have to deal with infectious disease, especially in solid waste management but also in other aspects of sanitation and hygiene

• Institutional Context/Stakeholders: The main differentiating factor
Planning is different in different types of facilities

- Different levels of infrastructure
- Different levels of staffing – medical, admin, O&M
- Different institutional context
- Public facilities, non-profit/church facilities, private for-profit facilities
Guatemala Health System

Ministry of Health

Health Areas or Districts
- Municipal-level Health Centers (CAIMI’s, CAP’s, etc)
- Community-level Health Centers (Centros de Convergencia)

Vice-Ministry of Hospitals
- Hospitals (Regional, National, etc)
• Most interventions are repairs or upgrades, not construction of new facilities

• Start with analysis of how things got where they are
  • Why did the infrastructure fail?
    • Poor equipment?
    • Insufficient capacity?
    • Age?
    • Lack of maintenance knowledge?
    • Lack of maintenance budget?
    • Other?

• Work with stakeholders to develop a plan for how to avoid repeating this and commitment for following through
Operations

Regularly scheduled activities that are required to keep infrastructure running

- Turning water pump on and off
- Filling up chlorinator
- Filling up soap or paper towels
Preventive Maintenance

*Regularly scheduled maintenance activities that help prevent unexpected failures in the future.*

- Testing and monitoring: water quality, pump performance, etc
- Cleaning: mechanisms, pipes, tanks, filters, etc
- Changing: Filter cartridges, etc
Corrective Maintenance

Maintenance activities that are performed once a piece of equipment or infrastructure has failed

• Fixing leaks: pipes, gaskets, seals
• Repairing or replacing pumps, controls
• Changing fixtures or tiles
**Planning Questions**

- Identify the infrastructure or technology in the facility. Be specific. How many toilets, handwashing stations, how much piping, etc?
- Schedule operations and preventive maintenance activities.
- Project corrective maintenance needs
- Identify materials required
- Identify skills required (In-house? Contract? Institutional?)
- Feeds into staffing plan and budget as well as schedule and overall plan
How Does Institutional Context Influence O&M

• Who pays for O&M?
• Who does O&M?
• Who authorizes O&M?
• Who supports O&M?
• Answers to these questions will be different for each type of healthcare facility
Monitoring and Evaluation for O&M

- O&M logs for regularly scheduled activities
- Identify people responsible for identifying problems when they arise
- Reports on repairs and replacements
- Inventory of supplies
- Should also include someone outside of maintenance department

<table>
<thead>
<tr>
<th>Activity</th>
<th>Date Planned</th>
<th>Date Carried Out</th>
<th>Responsible Party</th>
<th>Notes, materials used, parameters tested, etc.</th>
</tr>
</thead>
<tbody>
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</tbody>
</table>
Personnel for O&M
Human Resources for O&M

- Roles and Responsibilities
  - Who on the staff responsible for the various O&M activities?
  - Is there a dedicated O&M staff/team?
- Skill Building
  - How are the skills to perform O&M developed?
- Communication and Engagement
  - What system is in place to communicate O&M needs?
- Outsourcing
  - What O&M activities (preventative and corrective) need to be outsourced?
  - Can this outsourcing come from the surrounding community?
Costing for sustainable Operation and Maintenance (O&M) of WASH services in HCFs

Laxman Kharal
Asia WASH Adviser, based in Nepal
Terre des hommes
Costing for sustainable O&M of WASH services in HCFs

• This is an exercise under an Advocacy Project for sustainable Operation and Maintenance (O&M) of WASH services in HCFs.

• The project is being carried out in Bardiya, Nepal under Swiss Water and Sanitation Consortium Program.

• The project aims to develop WASH O&M policy for HCFs in Thakurbaba Municipality, in Bardiya district and use the outcomes and the experiences for advocacy.
References used in the costing exercise

1. Life cycle costing (IRC) 
   WASH in general

   - And its “Costing toolkit spreadsheet”.
   - Available at washinhcf.org
Life Cycle cost components

1. **Capital expenditure (CapEx)** – initial establishment cost (one time).
2. **O&M expenditure (OpEx)** – for operation and minor repairs (labour and material).
3. Capital maintenance expenditure (**CapManEx**) – Rehab and renewal.
4. Cost of capital (**CoC**) - accessing funds to construct (interest on loans).
5. Expenditure on **direct support (ExpDS)** - monitoring, building capacity (can be under OpEx).
6. Expenditure on **indirect support (ExplDS)** - general capacity building, policy making, planning, regulation and contributions to sector working capacity.
‘Repair cost’ and ‘Functionality’ Calculation

<table>
<thead>
<tr>
<th>WASH FACILITIES</th>
<th>qty</th>
<th>Breakdown/year</th>
<th>Repair time</th>
<th>Repair Cost</th>
<th>working days/year (X)</th>
<th>Functionality (X/365)</th>
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<tr>
<td>Water system</td>
<td>3</td>
<td>24</td>
<td>2</td>
<td>300</td>
<td>7,200</td>
<td>317</td>
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<tr>
<td>Toilet (seats)</td>
<td>19</td>
<td>52</td>
<td>1</td>
<td>250</td>
<td>13,000</td>
<td>313</td>
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<tr>
<td>Water treatment system</td>
<td>1</td>
<td>12</td>
<td>1</td>
<td>500</td>
<td>6,000</td>
<td>353</td>
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<tr>
<td>Hand washing station (PoC)</td>
<td>19</td>
<td>5</td>
<td>2</td>
<td>200</td>
<td>1,095</td>
<td>354</td>
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<tr>
<td>Hand washing station (Toilets)</td>
<td>15</td>
<td>7</td>
<td>2</td>
<td>200</td>
<td>1,387</td>
<td>351</td>
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<tr>
<td>Placenta pit</td>
<td>1</td>
<td>6</td>
<td>1</td>
<td>1000</td>
<td>6000</td>
<td>359</td>
</tr>
<tr>
<td>Total/Average</td>
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<td></td>
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## Linking costing with ‘Coverage’, ‘Functionality’ and ‘Use’

<table>
<thead>
<tr>
<th>EXISTING WASH FACILITIES</th>
<th>COVERAGE</th>
<th>FUNCTIONALITY</th>
<th>USE</th>
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<tr>
<td></td>
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<td>actual</td>
<td>%</td>
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<td>Toilet (seats)</td>
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<td>Placenta pit</td>
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<td>Waste pit</td>
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<td></td>
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<tr>
<td>Waste room</td>
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<tr>
<td>Cleaning Service A.</td>
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</table>

**Total Coverage:** 0.75

**Total Functionality:** 0.93

**Total Use:** x
We will share our outcomes in future and welcome remarks and suggestions that can be emailed to me at lkharal@tdh.ch

Thank You
Operation and Maintenance of WASH in Health Care Facilities

A case of Amuru district, Uganda
National initiatives

• Allocation of 30% of the Primary Health care (PHC) budget to health promotion and disease prevention.

• Health Unit management Committees (HUMC).

• Result based financing.
Deliberate efforts for O&M of our WASH in HCF in Amuru District

- Lobbied to have O&M plans and budgets.

- Oriented HUMC to monitor and enforce O&M.

- Advocated for enforcement of 30% PHC contribution to WASH.

- Infection Prevention and control hold 30% of the weight for RBF.
Key Outcomes

- Sustainability of installed systems; Key to performance under RBF.

- Innovations to maintain functionality.

- Health Facilities are able to do minor repairs using M&E funds.

- Improvement in utilization of MNCH services in the HFs due functional WASH systems – contribution to RBF.
Key ingredients

• Efforts are more deliberate when WASH is part of a felt need for the Health worker (RBF).

• WASH systems that are appealing and make work easier for the health workers are most likely to be cared for.

• Governance: When HUMC are given oversight authority over the WASH system, accountability is enhanced.
Resources on O&M

**Guidelines and SOPs:**


*Standard Operating Procedures (SOPs) for WASH in Health Care Facilities (HCFs).* SNV 2021.


**Toolkits:**

*Development and application of tools to cost the delivery of environmental health services in healthcare facilities: a financial analysis in urban Malawi.* BMC Health Services Research, Volume 21, Article number: 329 (2021). Darcy M. Anderson, Ryan Cronk, ... Jamie Bartram

**Research:**