



NATIONAL GUIDELINES

for

WATER, SANITATION AND HYGIENE (WASH) IN HEALTHCARE FACILITIES IN NIGERIA

FEDERAL MINISTRY OF HEALTH, 2022

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NATIONAL GUIDELINES FOR WATER, SANITATION AND HYGIENE (WASH) IN HEALTHCARE FACILITIES IN NIGERIA

**FEDERAL MINISTRY OF HEALTH
2022**

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These include;

1.Related National Legislations

- i. National Health Act 2014.
- ii. Nigeria Centre for Disease Control Act (NCDC Act 2018)
- iii. National Primary Healthcare Development Agency Act (NPHCDA 1992)
- iv. National Environmental Standards and Regulations Enforcement Agency (NESREA), Act 2009
- v. National Environmental (sanitation and Waste Control) Regulation 2009.
- vi. National Environmental Health Practices Regulations, 2016
- vii.Environmental Health Officers Registration Council of Nigeria (EHORECON) ACT, 2002

2.Related Sectoral National Policies

- i. National Health Policy 2016.
- ii. National Rural Water Supply and Sanitation Policy 2000
- iii. National Healthcare Waste Management Policy 2013.
- iv. National Environmental Sanitation Policy 2005
- v. National Water Resources policy and strategy 2016
- vi. National Health Promotion Policy 2019

3.Related National Strategies

- i. National Health Strategic Development Plan II (NHSDP II) -2018-2022
- ii. Partnership for Expanded Water Sanitation and Hygiene (PEWASH) 2016.
- iii. Clean Nigeria Campaign Proposal
- iv. National Environmental Sanitation Action Plan - FMENV
- v. Clean and Green Programme – FMENV
- vi. National hygiene promotion strategy- Nigeria
- vii. National water resources road map 2016
- viii.Protocol for verification and certification of ODF and Total Sanitation Communities and Rural markets in Nigeria. 2017
- ix. Strategies for scaling up Rural Sanitation and Hygiene in Nigeria 2007
- x. Water Sanitation and Hygiene - National Outcome Routine Mapping (WASH-NORM) survey 2019.

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FOREWORD

In Nigeria, there is no comprehensive National document on Water, Sanitation and Hygiene (WASH) in Healthcare Facilities (HCFs) to direct and harmonize the activities in WASH services and the assignment of roles and responsibilities in HCFs.

This comprehensive National Guidelines on Water, Sanitation and Hygiene in Healthcare Facilities in Nigeria is aimed at guiding, standardizing and strengthening the provision of WASH services by different stakeholders at all levels towards addressing the prevailing WASH related problems in HCFs in Nigeria.

Safe drinking-water, Sanitation and Hygiene are crucial to human health and well-being. Safe WASH is not only a prerequisite to health, but contributes to livelihoods, school attendance and dignity and helps to create resilient communities living in healthy environments.

The role of Water, Sanitation and Hygiene (WASH) facilities in preventing the spread of infections and promoting good health in the Healthcare facilities is the focal point of this document. Development of functional Water, Sanitation and Hygiene (WASH) facility/system has been recognized as an effective strategy for the prevention and control of diseases most especially epidemic prone diseases. An effective and efficient WASH facility/system provides a break in the chain of disease transmission that will lead to reduction of morbidity and mortality that may result from the epidemics of these infectious diseases. In the light of COVID-19 and other emerging Viral Hemorrhagic Fevers (VHDF's), WASH services are essential and familiar functions of local, state and federal public health agencies. It is mandatory component of Infection Prevention and Control (IPC) for healthcare providers and the general public. WASH services as a strategy reduces the burden of case management for infectious diseases and help public health managers and decision-makers to effectively prevent, contain and manage disease outbreaks.

Without access to adequate Water, Sanitation and Hygiene (WASH) facilities, healthcare centers in Nigeria would be ill equipped to manage even the COVID-19 crisis and other Health associated infections HAIs, while the poorest and most vulnerable people in the country would be left to face the pandemic alone with not even the most basic defense-clean water and a bar soap.

Despite handwashing with soap being one of the critical first lines of defense against the spread of the highly contagious and deadly coronavirus disease, a good number of healthcare centres in Nigeria are at risk of becoming epicenters of the disease because of lack of access to combined Water, Sanitation and Hygiene (WASH) services, putting the lives of doctors, nurses, midwives and patients at risk.

There is need for these Guidelines to be widely circulated and disseminated to ensure a harmonized approach to WASH services and guaranty accessibility of health professionals at all levels for effective utilization and assurance of the benefits of WASH in Infection, Preventions and Control (IPC) of diseases in HCFs in Nigeria. A periodic review of this document to ensure continued relevance is not only desirable but inevitable.

Dr. (Senator) Adeleke Olorunnimbe Mamora

*Honourable Minister of State for Health,
Federal Ministry of Health
Abuja, Nigeria. 2022*

PREFACE

This comprehensive National Guidelines document has been designed to address the gaps associated with Water, Sanitation and Hygiene (WASH) services in Healthcare Facilities (HCFs) in Nigeria through the technical inputs of the Technical Committee, Technical Review Team and National Stakeholders meetings.

The document has been categorized into nine sections and the annex.

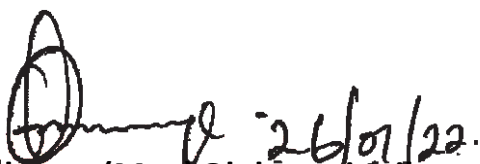
While Sections One, Two and Three look at the Introduction, Strategic Plans for Implementing WASH in Healthcare Facilities and Establishment of WASH Teams in Healthcare Facilities respectively.

Section Four, Five and Six dealt with the Water Supply in Healthcare Facilities, Sanitation in Healthcare Facilities and Hygiene in Healthcare Facilities. These are focal areas of WASH and were handled to close the gaps and provide the desired approach in WASH services in HCFs.

Section Seven and Eight also treated Healthcare Waste Management (HCWM) in Healthcare Facilities and Environmental Cleaning in Healthcare Facilities. These were treated separately from Sanitation for emphasis and better understanding.

Section Nine is the Monitoring of WASH in Healthcare Facilities. This looks at the coordination, monitoring and Reporting procedure.

The Overall intention of this document is the harmonization, strengthening and standardization of provision of WASH services in the Healthcare Facilities in Nigeria for Infection, Prevention and Control of disease for the well-being of Nigeria people.



Pharm. (Mrs.) Olubunmi Aribéana

Director, Food and Drug Services Department

Federal Ministry of Health

Abuja, Nigeria. 2022

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Our profound appreciation to the United Nations Children's fund (UNICEF) for their Financial and Technical support for the finalization and printing of this document.

Our special thanks also to the Technical Committee and the 6-Man Technical Team for their technical expertise, and time in the development process of this document.



M. Mamman

*Permanent Secretary,
Federal Ministry of Health
Abuja, Nigeria. 2022*

ABBREVIATIONS AND ACRONYMS

CBO	Community Based Organization
CDC	Centre for Disease Control
CRPD	Convention on the Rights of Persons with Disabilities
DHQP	Division of Health Quality Promotion
E.coli	Escherichia coli
ENT	Ears, Nose and Throat
ESCWA	Economic and Social Commission for Western Asia
FBO	Faith Based Organization
FME_{Env}	Federal Ministry of Environment
FMOH	Federal Ministry of Health
FMWR	Federal Ministry of Water Resources
WASH	Water, Sanitation and Hygiene
WASHCOM	Water, Sanitation and Hygiene Committee
WASH NORM	Water, Sanitation and Hygiene National Outcome Routine Mapping
WHO	World Health Organization
HAI	Healthcare Associated Infection
HCF	Healthcare Facility
HCWs	Healthcare Workers
HCWM	Healthcare Waste Management
HIV	Human Immunodeficiency Virus
JMP	Joint Monitoring Programme
LGA	Local Government Area
MDG	Millennium Development Goals
MDP	Municipal Development Partnership
MHM	Menstrual Hygiene Management
NHMIS	National Health Management Information System
NGO	Non-Governmental Organization
ODF	Open Defecation Free
O & M	Operation and Maintenance
OPD	Outpatient Department
PHC	Primary Healthcare
PPE	Personal Protective Equipment
RCH	Reproductive Child and Health
RUWASSA	Rural Water, Sanitation and Surveillance Agency
RWH	Rain Water Harvesting
SARS	Severe Acute Respiratory Syndrome
SDG	Sustainable Development Goals
SON	Standards Organization of Nigeria
SOP	Standard Operating Procedure
THC	Tertiary Healthcare
UNICEF	United Nations Children's Fund
UN	United Nation
USAID	United State Aid
VIP	Ventilated Improved Pit Latrine
WUI	Water Use Intensity

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SECTION ONE: INTRODUCTION

1.1 Background

The role of Water, Sanitation and Hygiene (WASH) services in preventing the spread of infections and promoting good health in the healthcare facilities (HCFs) cannot be over emphasized. It has been established that poor WASH services in HCFs is responsible for the spread of some infectious diseases, especially among the children under 5 years of age. In a joint report by WHO and UNICEF, 2019 titled; '**Water, sanitation, and hygiene in health care facilities: Practical steps to achieve universal access for quality care**,¹ it was noted that globally, more than one million deaths each year are associated with births in unhygienic environment; infections account for 26% of neonatal deaths and 11% of maternal mortality.²

WASH facilities and services in HCFs requires a standardized approach that will guide its provision, to ensure quality and safe care for staff, patients, carers and visitors. The poor sanitary condition in our HCFs promotes the spread of infectious diseases.

Though improved WASH in HCFs is a necessary condition for comprehensive healthcare services and crucial to improving health outcomes, access to such services in healthcare settings especially in the low and middle-income cluster countries like Nigeria is generally poor. This situation is linked, among other things, with:

- (i) Limited financial and human resources for effective and efficient implementation of WASH services; and
- (ii) Lack of clear approach of standardizing and strengthening monitoring mechanisms of WASH interventions in HCFs³ (WHO/UNICEF, 2015).

These factors are partly responsible for the inability of Nigeria to meet the Millennium Development Goals (MDGs) targets on Water and Sanitation in 2015, hence the need for a pragmatic approach to meet the targets of the Sustainable Development Goals (SDGs) 3 and 6 on good health and WASH access respectively by 2030.

¹WHO and UNICEF report, 2019; '**Water, sanitation, and hygiene in health care facilities: Practical steps to achieve universal access for quality care**

²WHO and UNICEF report, 2019; '**Water, sanitation, and hygiene in health care facilities: Practical steps to achieve universal access for quality care**

³WHO/UNICEF, 2015: Good practices in the provision of accessible and inclusive WASH services – (UNICEF Accessible Inclusive WASH Mapping 2015

1.2 Overview of WASH in Healthcare Facilities

1.2.1 Global and Regional Context

World leaders recently declared that Universal Health Coverage (UHC) and access to high quality, integrated “people centred” health services, are essential to health for all and to human security.⁴ Yet, efforts to accelerate UHC and quality of care will be undermined because fundamental infrastructure and hygiene in health facilities are not in place. A WHO/UNICEF 2015 global review reported that nearly 40% of facilities lack water supplies, 19% are without sanitation and 35% do not have any hand hygiene materials.⁵ Indeed, UHC may be an empty promise without adequate attention to quality, and quality initiatives will fail without adequate attention to water, sanitation and hygiene (WASH).

The lack of WASH services compromises the ability to provide safe and quality care, places both health care providers and those seeking care at substantial risk of infection-related morbidity and mortality, and pose significant economic and social burden. Pregnant women, who are increasingly giving birth in HCFs, and their new-borns, are especially vulnerable to the consequences of poor WASH services. Among hospital-born babies in developing countries, healthcare associated infections are responsible for between 4% and 56% of all causes of death in the new-born period, 75% of which occur in South-East Asia and sub-Saharan Africa.⁶ To address this major gap in services, in 2015, WHO and UNICEF (along with health and WASH partners from across the globe) committed to the vision, that by 2030, every health care facility, in every setting, should have safely managed, reliable water, sanitation and hygiene facilities and practices that meet staff and patient needs. One output from this commitment has been the development of Water, Sanitation, Hygiene Facility Improvement Tool (WASHFIT).

WASH FIT is a risk-based approach for improving and sustaining water, sanitation and hygiene and healthcare waste management infrastructure and services in health care facilities in low- and middle-income countries (LMIC). WASH FIT is an improvement tool to be used on a continuous and regular basis, to first and foremost help health care facility staff and administrators prioritize and improve services, and, second, to inform broader district, regional and national efforts to improve quality health care. The WASH FIT guide contains practical step-by-step directions and tools for assessing and improving services. It is adapted from the Water Safety Plan (WSP) approach recommended in the WHO Guidelines for drinking-water quality (WHO, 2011) and goes beyond water safety to include sanitation and hygiene, health care waste, management and staff empowerment.

During the 72nd World Health Assembly held in May 2019, the Resolution on WASH in health facilities was approved. It was highlighted that WASH in health facilities play a fundamental role in achieving universal health coverage, improving quality of care and preventing spread of antimicrobial resistance. WHO Member States committed to developing national roadmaps, setting and monitoring targets, increasing investments in infrastructure and human resources and strengthening systems to improve and sustain Water, Sanitation and Hygiene (WASH) services in healthcare facilities.

⁴World Bank, WHO, UNICEF, JICA and UHC 2030 International Health Partnership (2017). Tokyo Declaration on Universal Health Coverage. December 2017. [http:// www.who.int/universal_health_coverage/tokyo-declaration-uhc.pdf?ua=1](http://www.who.int/universal_health_coverage/tokyo-declaration-uhc.pdf?ua=1)

⁵WHO/UNICEF (2015). Water, sanitation and hygiene in health care facilities: Urgent needs and actions. Meeting report. http://www.who.int/entity/water_sanitation_health/facilities/wash-in-hcf-geneva.pdf?ua=

⁶WHO. Health care associated infections. Fact sheet. http://www.who.int/gpsc/country_work/gpsc_ccisc_fact_sheet_en.pdf?ua=1

For more information on the global action plan, visit www.washinhcf.org

According to World Health Organization (WHO), there are eight (8) practical steps countries can take to improve WASH in healthcare facilities which may take place at the national, sub-national level or both. The steps are: conduct a situation analysis and assessment; set targets and define a national roadmap; establish national standards and accountability mechanisms; improve and maintain infrastructure; monitor progress and review data; develop the health workforce; engage communities; and conduct operational research and share learning. These steps can be achieved based on country priorities and context, of which Nigeria has already declared a state of Emergency in the WASH sector by President Muhammadu Buhari in November, 2018. Hence, the need to begin the implementation of these steps in our Health Facilities.

1.2.2 Nigeria Perspective

The overall status of the WASH sector in Nigeria is poor. Only 9% of the population has access to complete basic water, sanitation and hygiene services. Specific to WASH in Healthcare facilities, 26% of health facilities do not have toilets/latrines on premises, only 20% of health facilities have basic hand hygiene services and only 4% of health facilities have combined basic water supply, sanitation, and hygiene services. Furthermore, only 32% of health facilities have hand hygiene stations with soap and water at points of care, while 28% keep a dedicated budget for cleaning and maintaining the WASH facilities and 33% safely separate their garbage and waste into at least three labelled bins in consultation areas and safely dispose of garbage/waste.⁷

Despite hand-washing with soap being one of the critical first lines of defence against the spread of the highly contagious and deadly corona virus disease, 95% of all healthcare centres in Nigeria are at risk of becoming epicentres of the disease because of lack of access to combined water, sanitation and hygiene (WASH) services, putting the lives of healthcare workers, patients, visitors and carers at risk. Worse still, about 150 million people (79%) in Nigeria do not have access to hand-washing facilities including soap and water.⁸

Healthcare services are provided in facilities operated by both public and private sectors which are hierarchically categorized into three levels:

- i. Primary Healthcare (PHC), which is a grassroots management approach in providing healthcare services to communities comprising of health posts, PHC centres and Primary Health clinic.
- ii. Secondary Healthcare (SHC). This level is an intermediary between the PHC and THC usually having a State management approach. It comprises General and Private Hospitals.
- iii. Tertiary Healthcare (THC). This level of healthcare system is known as specialized consultative healthcare usually for inpatients and on referral from primary and secondary healthcare for advanced medical investigation and treatment. The main providers of tertiary care are University Teaching Hospitals (Federal and State), Federal Medical Centres, Specialized Hospitals and National Hospital.

Generally, the healthcare system is characterized by a marked discrepancy in the availability and quality of WASH services between private and public facilities and between urban and rural areas. Also, the tertiary and general hospitals tend to be overcrowded because the primary healthcare centres are functioning below expectation.

1.2.3 Gaps in WASH facilities in Healthcare Facilities

Despite the availability of existing laws, policies and regulations supporting WASH activities in Nigeria (refer appendix 1, for list of existing laws, policies and regulations in Nigeria), there are gaps relating to WASH access, financing, inclusion and gender, monitoring and reporting.

⁷WASH National Outcome Routine Mapping (WASH NORM) report 2019

⁸The scandal of 95% of healthcare centres in Nigeria and 150 million Nigerians without access to water and hygiene facilities in the face of the COVID-19 pandemic, WaterAid, May 2020

Whereas, water, sanitation, hygiene, waste disposal and environmental cleaning services play critical roles in the continuum of healthcare, access to WASH services in Nigeria remains alarmingly poor. According to the 2019 WASH National Outcome Routine Mapping (NORM) report, only 4% of HCFs have comprehensive access to water, sanitation and hygiene services, 5% have access to only sanitation and hygiene services, while 14% have access to only water and hygiene services.⁹

It is important to note that with a potential increase in patient influx, the demand for water and sanitation services might be higher than the available resources; it will be essential to close the gap to avoid disruption of health services.

1.3 Rationale for Developing the Guidelines

Whereas there are existing policies, guidelines and frameworks with components of WASH in healthcare facilities, however, there are no comprehensive national guidelines for the provision of WASH services in HCFs. This could lead to lack of standardization in planning and budgeting, technical designing and construction, operation and maintenance with respect to quality of care in different healthcare settings such as emergencies, intensive care unit (ICU), burns unit, isolation centres etc.

Availability of national guidelines will ensure effective monitoring and integration of WASH services in HCFs into national strategies thereby contributing to the achievement of the Sustainable Development Goals (SDGs) 3 and 6 targets in Nigeria by 2030.

1.4 Scope of the Guidelines

These guidelines are developed for use by all stakeholders in the health sector including those involved in architectural and design works of the healthcare facilities.

These guidelines will focus on the promotion of WASH services at all levels of healthcare facilities in line with the domains of UNICEF/WHO WASH Facility Improvement Tool (WASH-FIT),¹⁰ which comprises of Water (quantity and quality), Sanitation (Faecal waste, storm water and healthcare waste), Hygiene (Hand Hygiene and Environmental disinfection) and Management (Planning, budgeting, monitoring and reporting).

1.5 Overall goal of the Guideline

To institutionalize WASH in all HCFs as part measures to improve quality healthcare services in Nigeria.

1.5.1 Specific objectives

The guidelines are to:

- i. Offer practical guidance for effective and efficient provision of standardized WASH services in both public and private healthcare facilities for improved quality of healthcare delivery in Nigeria
- ii. Provide benchmark for monitoring of WASH services in HCFs
- iii. Operationalize the WASH component of the National Strategic Health Development Plan II (NSHDP II) 2018-2022 and beyond.
- iv. Improve sanitation and hygiene practices in HCFs
- v. Define standard protocols for WASH practices in HCFs by health workers, patients, caregivers and visitors.

⁹WASH National Outcome Routine Mapping (WASH NORM) report 2019

¹⁰Water and sanitation for health facility improvement tool (WASH FIT) 2018; A practical guide for improving quality of care through water, sanitation and hygiene in healthcare facilities

2

SECTION TWO: STRATEGIC PLANS FOR IMPLEMENTING WASH IN HEALTHCARE FACILITIES

2.1 Implementation of National Guidelines

These guidelines will be implemented by all relevant stakeholders by adopting the following strategies:

- i. Integrate implementation of WASH services into regular health sector planning, budgeting and programming to deliver quality services including Covid-19 response and recovery efforts
- ii. Develop facility-based costed action plans for addressing sustainable WASH services that includes elements of IPC, healthcare management and hygiene behaviour change programmes amongst others.
- iii. Conduct advocacy to political, traditional and private sector leaders including policy makers at all levels for ownership and support.
- iv. Ensure effective collaboration with stakeholders from relevant MDAs, development partners, NGOs, Media, CSOs, CBOs, FBOs, Disability support organisations, women and youth groups, Patient Support Groups etc.
- v. Capacity building of all healthcare workers to achieve a culture of adherence to standardized IPC practices in all HCFs.
- vi. Implement WASH guidelines in line with existing IPC programmatic structure at every HCF as recommended by WHO's minimum requirements for establishment of, and core components of IPC programmes.¹¹
- vii. Provide dedicated budget lines (life circle budgeting) to improve and maintain WASH services in healthcare facilities.
- viii. Constitute a dedicated WASH Team in every HCF who will be part of the IPC committee to support continuous improvement, planning and implementation of WASH services. WASH focal person can be appointed where there are inadequate staff members to form a team and work with the IPC focal person in such facility.
- ix. Build and maintain a data base for WASH services in HCF at all levels
- x. Conduct regular risk and hazard assessments of HCFs. Using identified findings, develop, implement and monitor improvement plan to prevent the spread of infectious diseases.
- xi. Explore new technologies and current innovations to improve infrastructural facility, reduce cost and enhance service delivery.

¹¹<https://www.who.int/teams/integrated-health-services/infection-prevention-control/core-component-8>

2.2. Planning and Budgeting for WASH in Healthcare Facilities

Planning and budgeting is necessary for the economic utilization of materials, manpower, and financial resources. It entails deciding in advance what to do, who to do, when to do, how to do and with what resources in order to achieve the desired result.

2.2.1 Planning Process

The following steps should be adopted while planning to improve WASH in HCFs.

Step 1 Conduct situational analysis/needs assessment for WASH services in healthcare facilities using the WASHFIT¹² or other applicable standardized tools.

Step 2 Scrutinize WASH plans

Step 3 Establish costs for each identified WASH needs

Step 4 Prioritize WASH needs

Step 5 Explore different sources of funding for WASH interventions

Step 6 Resources prioritization for new WASH interventions or improvements.¹³

2.2.2 Funds allocation criteria

Allocation of resources to different WASH services should be based on the following aspects:

- I. The list of prioritized WASH needs based on findings from the situational analysis/ needs assessment including personnel demands.

Repair, maintenance and upgrade of activities WASH services in HCFs that are of great demand to vulnerable groups e.g. pregnant women, children under-five years of age, people with special needs etc.

2.2.3 Major considerations in planning and designing of WASH interventions

Facilities should be planned and designed in a manner that they are safe, user-friendly, and people-centred and provide equitable services with due community engagement.

2.2.3.1 WASH facilities for people with special needs

Special consideration should be given to the following;

- i. People with disabilities, such as those with limited mobility, visually impaired etc.
- ii. People seeking care as a result of disease of public health emergencies such as Lassa fever, cholera, COVID-19 etc. requiring isolation and standard precautionary interventions.
- iii. Other people with special needs such as; children, older persons (geriatrics), menstruating, pregnant and perinatal women.

2.2.4 Sustainability Plans

In implementing these guidelines, there shall be sustainability plans which should include the following:

- i. Enabling Environment (supportive leadership, alignment with existing WASH related policies/frameworks and guidelines on One-Health, IPC, AMR programmes, health security, Institutional capacity strengthening, Operation and Maintenance).
- ii. Sustainable funding of WASH services through domestic budgetary allocation at all levels of care and donor support.
- iii. Comprehensive inclusion of relevant stakeholders in planning and implementation of the guidelines
- iv. Monitoring and Evaluation Plan etc.

¹²<https://apps.who.int/iris/bitstream/handle/10665/254910/9789241511698-eng.pdf>

¹³World Health Organization and United Nations Children's Fund (2019), WASH in health care facilities: Practical steps to achieve universal access to quality care, https://www.who.int/water_sanitation_health/publications/washin-health-care-facilities/en/

SECTION THREE: ESTABLISHMENT OF WASH TEAMS IN HEALTHCARE FACILITIES

Each HCF irrespective of the category (Primary, Secondary or Tertiary) shall establish a WASH Team/ Focal point which shall be responsible for leading the assessment, planning, budgeting, implementing, monitoring and reporting of WASH related services in the facility.

3.1 Composition of the WASH Team / Focal point

The WASH team shall comprise of relevant multi-disciplinary professionals within the HCF and preferably led by a licensed Environmental Health Officer (EHOs). Where an EHO is unavailable, any Health Staff with adequate training in WASH and especially infection prevention and control shall suffice.

3.2 Roles of the WASH team / Focal point

The WASH team, working as part of the IPC committee/team shall be responsible for the implementation of the WASH component of the IPC programme (refer WHO core component 8 of IPC programme).

They shall;

- i. Lead the periodic assessment and reporting of the WASH and IPC situation in the HCF
- ii. Develop plans and budget to address the identified gaps in the WASH services and IPC in HCFs
- iii. Coordinate, monitor and report on the overall WASH services in the facility, including availability of materials for Water, Sanitation and Hygiene Services.
- iv. Undertake Operation and Maintenance (O & M) functions to ensure optimum performance and functionality of the WASH equipment and facilities.
- v. Develop and implement Standard Operating Procedures (SOP) and Protocols for all WASH services such as water quality, cleaning, waste management etc.
- vi. Train all staff engaged for delivery of WASH services in HCFs.
- vii. Where necessary, facilitate engagement of facility leadership with relevant stakeholders such as Community leaders, NGOs, CBOs, FBOs, and Donors etc.

Hold regular meetings and submit reports through appropriate channels to the facility leadership.

4

SECTION FOUR: WATER SUPPLY IN HEALTHCARE FACILITIES

4.1 Water needs, Quality and Standards in healthcare facilities

HCFs known for its high-Water Use Intensity (WUI) shall always have unhindered access to adequate water supply in terms of quality, quantity, reliability and accessibility in order to maintain patients' care services and other operations.

Water should be treated to meet the National and International Standards approved for its intended use e.g. Nigerian Standard for Drinking Water Quality (NSDWQ: NIS-554-2015 (Table 1).

Table 1: WHO Standards for Water, Sanitation and Hygiene in Healthcare Facilities (WHO, 2008)¹⁴

ITEMS	RECOMMENDATIONS	EXPLANATIONS
Water quantity	5–400 litres/person/day.	Outpatient services require less water, while operating theatres and delivery rooms require more water. The upper limit is for viral hemorrhagic fever (e.g. Ebola) isolation centres.
Water access	On site supplies.	Water should be available within all treatment wards and in waiting areas.
Water quality	Less than 1 Escherichia coli/ thermo-tolerant / total coliforms per 100 ml. Presence of residual disinfectant. Water safety plans in place.	Drinking-water should comply with (NSDWQ: NIS-554-2015) Standard for Drinking water Quality for microbial, chemical and physical aspects. Facilities should adopt a risk management approach to ensure drinking water is safe.

¹⁴WHO Standards for Water, Sanitation and Hygiene in Healthcare Facilities (WHO, 2008)

4.2 Water Sources

4.2.1 Types of Water Sources

Healthcare Facilities may access water through any of the following three main sources found in Nigeria:

- i. Ground water: These are sources whereby water is obtained from beneath the surface in rock and soil, and accumulates underground in aquifers e.g. Boreholes, Wells etc.
- ii. Surface water: These are sources whereby water is collected on the surface of the earth. They include lakes, rivers, dams, ponds or wetlands
- iii. Rain water: This is an alternative source that can ensure availability of water in HCFs through Rainwater Harvesting System (RHS), especially in areas with water scarcity or intermittent water supply.

4.2.2 Basic consideration in selecting appropriate water sources for HCFs

- a) Water Quantity
- b) Water Quality
- c) Protection of Water Sources
- d) Accessibility
- e) Affordability
- f) Feasibility
- g) Operation and Maintenance

4.3 Recommended Water Services for Healthcare Facilities in Nigeria

4.3.1 Recommended Water Supply Methods/Sources

Recommended water supply to HCFs shall be from any of the following methods/sources:

- i. Piped supply inside the building
- ii. Piped supply outside the building.
- iii. Tube well / Borehole
- iv. Protected dug well
- v. Protected spring
- vi. Rain water harvesting

4.4. Accessibility and Availability

The source of the water must be located within the premises, from an improved source and water should always be made available.

4.5 Protection of water sources

All water sources shall be adequately protected from pollution and contamination especially water from, tube well / borehole, protected dug well and rain water.^{15 16}

4.5.1 Considerations for Construction of Water sources

Healthcare Facilities should take into consideration the following during construction water sources to ensure they are protected.

¹⁵https://www.who.int/water_sanitation_health/dwq/sheet4.pdf

¹⁶https://www.water.wa.gov.au/__data/assets/pdf_file/0009/4014/104027.pdf

4.5.1.1 Tube well/Borehole

Tube wells should be sited in a suitable environment free from any form of waste disposal.

- i. Toilets should be sited downhill of tube wells and boreholes to avoid possible contamination.
- ii. The top of the tube well/borehole should be completely covered by making a concrete plinth to prevent any surface or spilt water from entering the well.
- iii. A hand-pump should be securely fixed on a concrete plinth for tube wells.
- iv. The plinth should be surrounded by a sloppy apron and a drainage channel built to allow spilt water to flow away from the wellhead to a soak-away for tube wells.
- v. There should be regular inspection and monitoring for water quality sampling and testing to ensure safe and adequate water supply.

4.5.1.2 Dug wells

- i. Dug wells should be sited in a suitable environment free from any form of waste disposal.
- ii. Toilets should be sited downhill of ground water such as hand dug well, borehole, etc. to avoid possible contamination.
- iii. New septic tanks or other sewage treatment methods to be installed at least 50 feet from a well.
- iv. Wells should be covered with a hard surface
- v. Wells should be lined with concrete rings to avoid washed sediment into the body of the water.

4.5.1.3 Rainwater

Water from this source can be collected using the Rainwater Harvesting System (RHS). The RHS collects water from house's roof into a storage tank. (surface or underground).

The following are recommendations for protection of rainwater from RHS;

- a) **Roofing:** Roofs suitable for the collection of water in Healthcare Facilities is the one which does not interfere with the quality and safety of the collected water. E.g. coated aluminium, stainless steel, aluminium sheet and concrete or terra cotta tiles.
- b) **Drainage:** it is important to bring together all downpipes into one pipe for entry into the tank.
- c) **Storage Tank Installation:**
 - i. In most cases a flat, shallow tank is preferable.
 - ii. The tank should have an inflow and an overflow. The overflow needs to go to a soak-away or surface water drain.
 - iii. Back filling around tank should be done with concrete or compactable gravel, depending on the tank.
- d) **Installing the pump:** A pump needs to be installed in the tank to send the water to the property.
- e) **Internal plumbing:** The internal pipe-work must be a dedicated feed to the toilets and washing areas.
- f) **Filtration:** Leaf filters are mostly built into the tanks and filters are also installed on the pump to stop particles coming through.
- g) **Main backup system:** To ensure there is an uninterrupted water supply to the building



FIGURE 1: Diagram for Different Method to Collect Rainwater

4.6 Operation, Maintenance and Protection of Water Supply System

An effective and efficient Operation and Maintenance management system should be put in place to ensure constant availability of water in the Healthcare Facility. (Table 2).

TABLE 2: Minimum Water Required in Healthcare Settings

HEALTHCARE SETTINGS	MINIMUM WATER QUALITY REQUIREMENT
Outpatients	5 liters per consultation
Inpatients	40-60 liters/patient/day
Inpatient Therapeutic Feeding Centre	60 liters/patient/day
Cholera Treatment Centers	60 liters/patient/day
Operating Theatre/Maternity Unit	100 liters/intervention
Severe Acute Respiratory Syndrome Isolation Center	100liters/isolation
Viral Hemorrhagic Fever Isolation Center	300-400 liters/isolation

SOURCE: World Health Organization, *Essential Environmental Health Standards in Healthcare*, WHO, Geneva, 2008, <www.who.int/water_sanitation_health/publications/ehs_hc/en>.

4.7 Water Storage

- Water should be stored in containers made of material that will not compromise the quality of the stored water.
- Storage container must be of adequate capacity to meet the water demand for the HCF
- Regular maintenance of the water storage facilities such as cleaning, disinfection etc. should be maintained.
- Routine cleaning, disinfection, and policies should be implemented and periodically reviewed.

4.8 Major Consideration in the Distribution of Water in Healthcare Facilities

The following aspects should be taken into consideration while installing water points in Healthcare Facilities:

- i. Suitable drinking-water points should be available for staff, patient and carers at all times.
- ii. Where piped water is available, it should be reticulated to critical points within the Healthcare Facility, e.g. wards, isolation areas, emergency units, consulting rooms, laboratory, laundry, toilets, sterilization units and operating theatres etc. Alternatively, running water should be available at all critical points using other methods e.g. buckets with taps (Veronica buckets).
- iii. Water should be made available at all times at hand washing points

4.9 Monitoring Indicators for Water Services in HCFs

Monitoring water services for HCFs should be based on the indicators provided by WHO/UNICEF as contained table 3 below:

TABLE 3: Monitoring Indicators for Water Services in HCFs

ELEMENT	MONITORING DEFINITION
Improved	Improved water sources are those which, by nature of their design and construction, have the potential to deliver safe water. Improved sources include piped water, boreholes or tube wells, protected dug wells, protected springs, rainwater, and packaged or delivered water.
Unimproved	Unimproved sources include unprotected dug wells or springs and surface water (e.g. lake, river, stream, pond, canals, irrigation ditches).
On premises	Water is accessed within buildings, or within the facility grounds.
Available	Water from the main water source is available always and on the day of the survey or questionnaire
Accessibility	The source of the water must be located within the premises and water should be available at all the time
Ownership	Facility owned or outsourced

5

SECTION FIVE: SANITATION IN HEALTHCARE FACILITIES

5.1 Introduction

Sanitary management of excreta in healthcare facility is important to ensure fecal pathogens do not contaminate the environment.

5.2 Criteria for Sanitation facilities in HCFs

The following minimum criteria should be considered when planning for sanitation management in HCFs:

5.2.1 Safety

Sanitation facilities including toilets should be safe to avoid the spread of harmful agents like microbes, physical and chemical contaminants, or disease harbouring vectors / vermin to prevent the transmission of infectious diseases. Measures should be put in place to control flies and breeding ground for mosquitoes, furthermore, floors should be dry to avoid falling.

5.2.2 Reliability

Toilets should be functional, clean and in good state of use at all times with provision of consumable (water, toilet-paper, soap, etc.)

5.2.3 Accessibility

Toilets must be accessible to intended users, located not more than 30 meters from users and should always be opened with the lock inside. Also accessible to Nurses station in case of falls or other emergencies.

5.2.4 User convenience

- i. There should be separate toilets for women, men, young children, and people with disability, people who are immobile, critically ill or in isolation, older persons, immune-compromised persons, pregnant, menstrual and perinatal women
- ii. Toilet for women/girls should have a mirror on the internal part of the door to enable effective changing of used menstrual material and self-cleaning bin with a lid for the disposal of used material and water and soap for menstrual hygiene and washing.
- iii. Mobility aids should be provided such as ramps, support grips and rails for people with visual impairments.
- iv. Signage indicating the location/direction of toilets as well as differentiating male and female toilets should always be in place.
- v. Provision of a bin with a lid on it with water and soap available in a private space for washing.
- vi. Lockable doors for privacy and clear pathways with lightings for proper accessibility.

viii. Dedicated separate toilet facilities for staff use

5.3 Design and construction of sanitation facilities

5.3.1 General considerations

Sanitation facilities for Healthcare settings should fall in any of the following categories:

- i. Pour flush
- ii. Water closet
- iii. Ventilated improved pit (VIP) toilets

5.3.2 Maintenance and hygiene of pour flush / water closet toilets

For maintenance and hygiene purposes the following practices are recommended:

- (i) Users of flush toilets should be reminded through a visibly displayed poster that they must flush and leave the toilet clean after use.
- (ii) Flush toilets should be cleaned using standard cleaning materials such as toilet brushes, detergents and approved disinfectants
- (iii) There should be a cleaning schedule that shows the frequency and duration along with a supervisor's verification column for monitoring and supervisory purposes.
- (iv) Periodic checks on effective functioning of the flush toilets in the HCF should be carried out to identify any mechanical faults especially the blockage of pipes and faulty cistern mechanism.
- (v) Since in many cases, flush toilets are located within the buildings, rectification of faults should be done immediately to avoid flies within the premises and eliminate odour from blocked toilets.

5.3.3 Maintenance and hygiene of Ventilated Improved Pit Toilets

- i. Users of VIP toilets should be reminded to always cover the pits to avoid flies' infestation.
- ii. Anal cleansing using water is recommended, however, where not available, anal cleansing materials such as toilet paper should be provided along with a bin for sanitary disposal.
- iii. Users of VIP toilets should be reminded to sweep out spills after anal cleansing with water.
- iv. VIP toilets should be cleaned using standard cleaning materials such as detergents and approved disinfectants.
- v. There should be a cleaning schedule that shows the frequency and duration along with a supervisor's verification column for monitoring and supervisory purposes.
- vi. Periodic checks on effective functioning of the vent and lid should be carried out to identify and rectify faults.
- vii. As many VIP toilets are located outside the building, adequate lighting and clearing of pathways to prevent exposure of users to hazards.

5.3.4 Toilet Facility for people with special needs

An accessible toilet should be designed to accommodate people with physical disabilities. Designs of sanitation facilities should essentially take into account the following categories of disabilities:

- (i) People with visual impairments should be provided with mobility aids such as ramps, support grips and rails including proper lighting of the pathways.
- (ii) The design of a toilet should include wider doors, and special grips or foldable seats for people who are non-ambulatory and on wheelchairs, crutches etc
- iii) Bed pans should be provided to people that are bedridden

5.4 Operations and Maintenance of Sanitation facilities

Sanitation infrastructure and facilities requires careful organization and actions to ensure smooth operations and provision of maintenance services in case of structural or functional changes. Routine and periodic maintenance services are prerequisite for sustaining sanitation facilities in healthcare facilities.

- (i) There should be a clear description of staff roles on management of sanitation infrastructure and services. Depending on the facility level, there should be a committee with assigned responsibilities in relation to maintaining sanitation infrastructure.
- (ii) Toilets should be cleaned whenever they are dirty, and at least thrice a day with a disinfectant used on all exposed surfaces and a brush to remove visible soiling. Strong disinfectants are unnecessary and should not be used in large quantities.¹⁷
- (iii) There should be weekly and daily cleaning schedule that specify when sanitation facilities should be cleaned and supplied with cleaning and hygiene agents. Cleaning schedule should identify persons or groups responsible for undertaking the cleaning tasks and their supervisors. The schedules should be displayed for easy access and be shared among responsible officers.
- (iv) Orientation, training, and education of users is an important aspect of operations that must be implemented. Orientation materials, personnel and time should be dedicated to help new comers, regular visitors, and staff members.
- (v) Operation and maintenance plan must be put in place to cover for the running and repairs of sanitation infrastructure and services. This should include regular or incidental repairs and scheduled maintenance activities.
- (vii) Faecal sludge should be emptied when the septic tank is $\frac{3}{4}$ full.
- (viii) Cleaning and maintenance inspection activities should be documented and reported in weekly meetings.

5.5 Monitoring Indicators for Sanitation Services in HCFs

Monitoring sanitation services for HCFs should be based on the indicators provided by WHO/UNICEF as contained table 4 below.

¹⁷Essential Environmental Health Standards in HCF, 2008

TABLE 4: Monitoring Indicators for Sanitation Services in HCFs

ELEMENT	MONITORING DEFINITION
Improved	Improved sanitation facilities are those designed to hygienically separate excreta from human contact. Improved facilities include: pour flush, septic tanks or pit latrines; ventilated improved pit latrines, composting toilets or pit latrines with slabs.
Unimproved	Unimproved facilities include pit latrines without a slab or platform, hanging latrines, and bucket latrines. For the purpose of this document “toilets” is taken to mean any of these improved facilities.
Usable	Toilets are available, functional, and private: Available to patients and staff (toilets are on premises; doors are unlocked or a key is available at all times) Functional (the toilet is not broken, the toilet hole is not blocked, there should be no cracks or leaks in the toilet structure and water is available for flush/pour-flush toilets), and Private (there are closable doors that can be locked from the inside and no large gaps or holes in the structure) on the day of the survey or questionnaire.
Dedicated for staff	There are separate toilet facilities dedicated for patient and staff use.
Gender separated with menstrual hygiene facilities	At least one toilet is separated for use by women / girls and has a bin with a lid on it and/or water and soap available in a private space for washing The recommended ratio of one toilet is 1/20 people and should be used as a planning guideline. Users include patients, staff and carers. Actual numbers required for inpatient settings will depend on a number of factors, including the average proportion of patients using bedpans instead of toilets. ¹⁸
Accessible for users with limited mobility	Toilets are considered accessible if they meet relevant national or local standards. In the absence of such standards, toilets should be accessible without stairs or steps, have ramps, handrails for support attached either to the floor or sidewalls, a door which is at least 80cm wide, and the door handle and seat within reach of people using wheelchairs or crutches/sticks.

¹⁸https://www.who.int/water_sanitation_health/hygiene/settings/ehs_health_care.pdf

6

SECTION SIX: HYGIENE IN HEALTHCARE FACILITIES

6.1 Hand Hygiene

Practicing hand hygiene is a simple yet effective way to prevent infections. Cleaning hands can prevent the spread of germs, including those that are resistant to antibiotics and are becoming difficult, if not impossible, to treat. Hand hygiene is the single most effective means of reducing the risk of Healthcare Associated Infections (HAIs).¹⁹ Failure to observe hand hygiene at critical times could increase the risk of spreading HAIs.

6.1.1 Promotion of hand hygiene practices in healthcare facilities

Effective hand hygiene in healthcare facilities has been the cornerstone of infection prevention and control. Health care workers and visitors to HCFs can spread pathogens through their hands. It is important that healthcare facilities provide adequate information and enlightenment on hand hygiene practices in addition to provision of hand -washing facilities with soap and water at all designated locations within the HCF used by health care workers, patients as well as visitors.

6.1.2 Awareness on transmission of pathogens by hands

Disease can spread when:

- i. Eyes, nose and mouth are touched with unclean hands.
- ii. Foods are prepared or eaten with unclean hands.
- iii. Hands are contaminated with respiratory droplets through coughing or sneezing and spread through handshakes, touching of surfaces and objects

6.1.3 General considerations for hand hygiene for non-healthcare workers in Healthcare Facilities

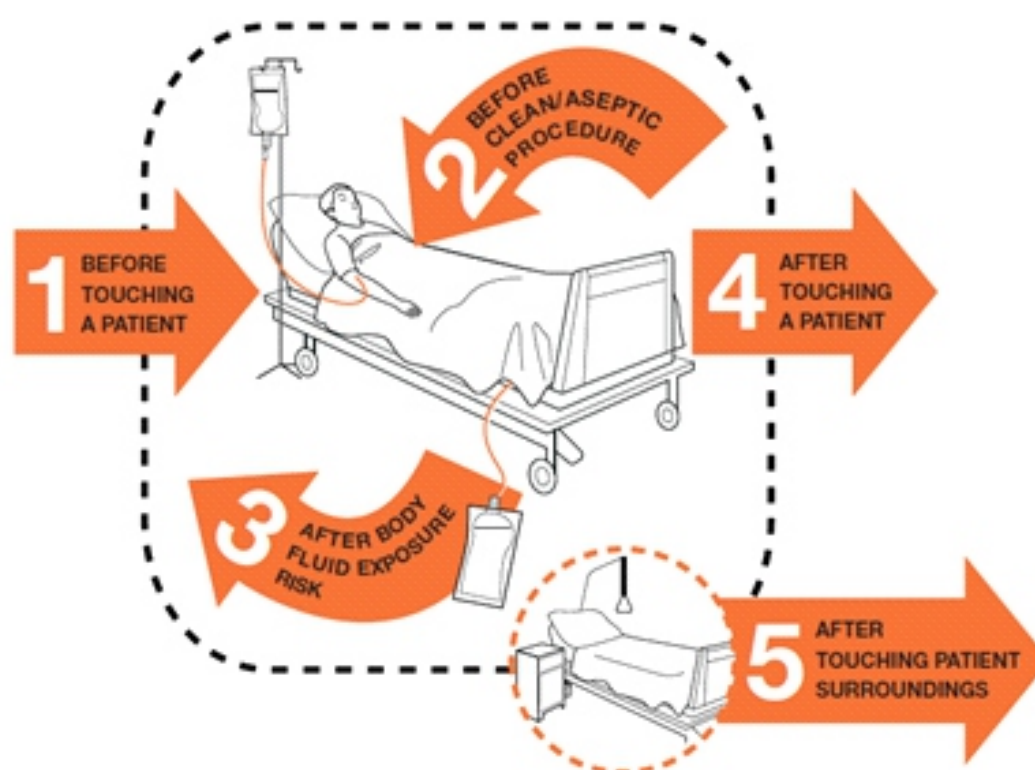
- i. Before and after caring for the sick in any form.
- ii. Before, during and after preparing, eating food and feeding a baby
- iii. After changing diapers or cleaning up a child who has used the toilet
- iv. After using the toilet
- v. Before and After using your face mask
- vi. After blowing nose, coughing or sneezing
- vii. After touching and disposing waste
- viii. After being in the public places and touched items or surfaces that may be frequently touched by other people, like doors, tables, gas pumps, shopping carts, or electronic cashier register / screen etc.

¹⁹https://www.healio.com/news/infectious-disease/20140422/10_3928_1081_597x_20140101_00_1340650

6.1.4 Hand hygiene in patient handling for Health Workers

WHO recommends five moments of hand hygiene to track hand hygiene performance of healthcare workers. The five critical moments of hand hygiene that should be performed to ensure the health and safety of patients and staff include:

- i. Before touching patients
- ii. Before performing clean or aseptic procedure
- iii. After a procedure with the risk of exposure to body fluids
- iv. After touching patients' directly and
- v. After touching patients' surroundings



1	BEFORE TOUCHING A PATIENT	WHEN?	Clean your hands before touching a patient when approaching him/her.
		WHY?	To protect the patient against harmful germs carried on your hands.
2	BEFORE CLEAN/ASEPTIC PROCEDURE	WHEN?	Clean your hands immediately before performing a clean/aseptic procedure.
		WHY?	To protect the patient against harmful germs, including the patient's own, from entering his/her body.
3	AFTER BODY FLUID EXPOSURE RISK	WHEN?	Clean your hands immediately after an exposure risk to body fluids (and after glove removal).
		WHY?	To protect yourself and the health-care environment from harmful patient germs.
4	AFTER TOUCHING A PATIENT	WHEN?	Clean your hands after touching a patient and her/his immediate surroundings, when leaving the patient's side.
		WHY?	To protect yourself and the health-care environment from harmful patient germs.
5	AFTER TOUCHING PATIENT SURROUNDINGS	WHEN?	Clean your hands after touching any object or furniture in the patient's immediate surroundings, when leaving – even if the patient has not been touched.
		WHY?	To protect yourself and the health-care environment from harmful patient germs.

Figure 2: WHO moments of hand hygiene²⁰

²⁰<https://www.hygiene-in-practice.com/media/your-5-moments-for-hand-hygiene/>

6.2 Handwashing Techniques

6.2.1 General Hand-washing Technique

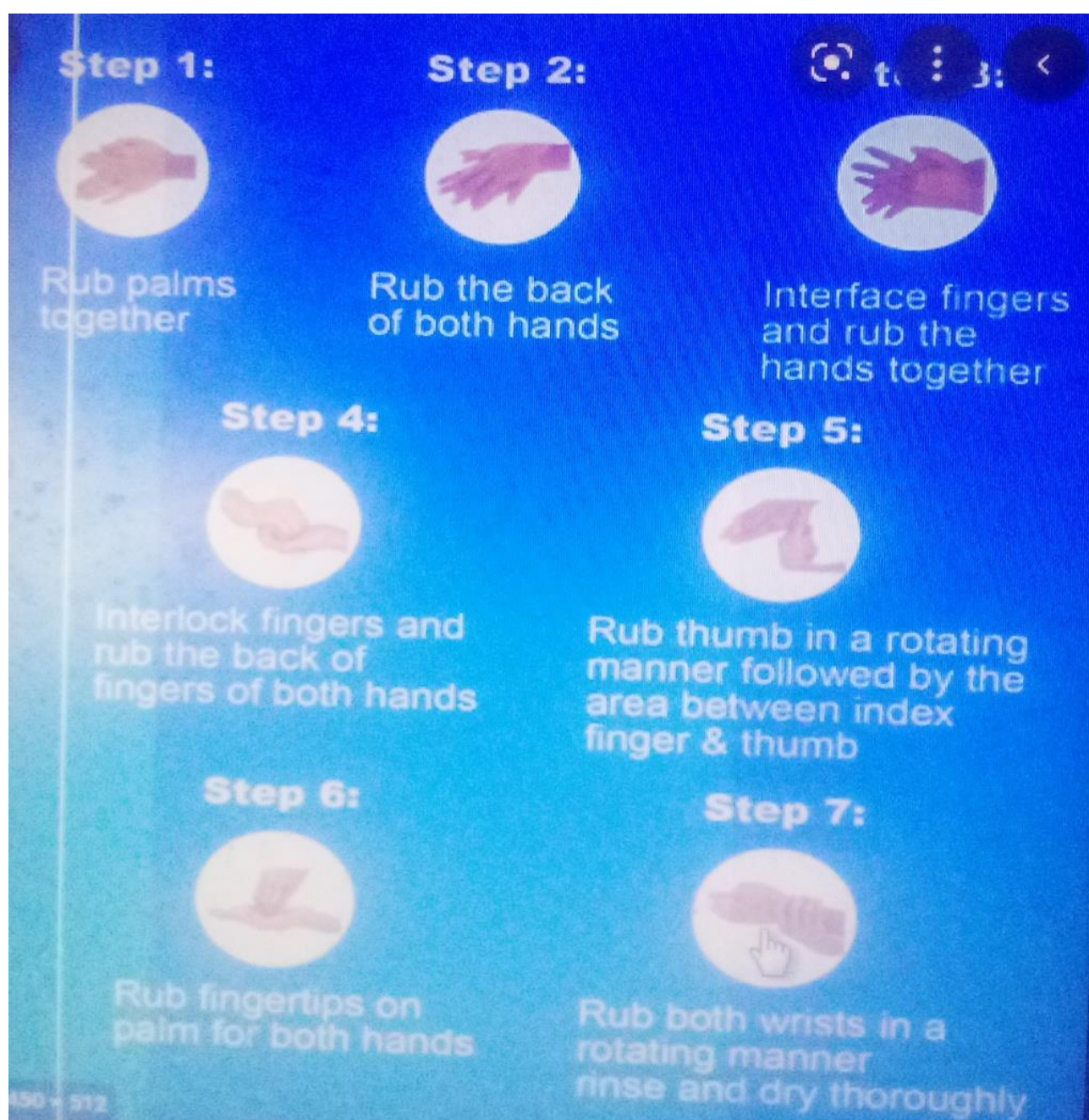
- i. Duration of the entire procedure should be 40-60 seconds
- ii. Remove all hand jewellery including rings and watches
- iii. Wet hands with water
- iv. Apply enough soap to cover all hand surfaces
- v. Rub hands palm to palm
- vi. Right palm over left dorsum with interlaced fingers and vice versa
- vii. Palm to palm with fingers interlaced.
- viii. Backs of fingers to opposing palms with fingers interlocked and rotational rubbing backwards and forwards
- ix. Rotational rubbing of the left thumb clasped in right palm and vice versa
- x. Rotational rubbing of the fingertips of the right hand on the palm of the left hand and vice versa
- xi. Rotational rubbing of the left wrist with the right hand and vice versa.
- xii. Rinse hands with water and dry hands thoroughly with a single use towel or air dry your hands if towel is not available
- xiii. Use towel to turn off faucet or your elbow if single use towel is not available
- xiv. Throw the paper towel in the waste bin



Figure 3: Hand Hygiene Technique with Soap and water²¹

6.2.2 Hand-washing Techniques prior to surgical operations (Scrubbing)

- i. Remove all jewellery and trim the nails
- ii. Use soap, a brush (on the nails and finger tips) and running water to clean thoroughly around and underneath the nails
- iii. Scrub your hands and arms up to the elbows
- iv. After scrubbing, hold up your arms to allow water to drip off your elbows
- v. Turn off the tap with your elbow.
- vi. Dry hands with a sterile towel and make sure the towel does not become contaminated.
- vii. Hold your hands and forearms away from your body and higher than your elbows until you put on a sterile gown and sterile gloves.
- viii. Always wash your hands after removing your gloves

6.2.3 Hand Hygiene using Alcohol Based Hand Rub (ABHR)

6.3 Basic Hygiene Services/Facilities

6.3.1 Hand Hygiene Facilities

A hand hygiene facility is any device that enables staff and patients to clean their hands effectively under running water such as, a sink with tap, water tank with tap, bucket with tap (Veronica bucket) or other similar device. Alcohol based hand rub dispensers are also hand hygiene facilities, whether they are fixed or portable.

To provide basic hygiene services in HCFs the following conditions must be satisfied:

- i. All the hygiene facilities must be functional.
- ii. Points of Care: There must be functional hand hygiene facilities at points of care (e.g consultation/examination rooms) with soap and water or either alcohol based hand rub however, when alcohol-based hand rub is used, healthcare staff may carry a dispenser around between points of care.
- iii. Accessibility: There must be functional hand hygiene facilities in toilets or (5meters of toilets and must have soap and water available always. Alcohol-based rub is not considered adequate for hand hygiene at toilet as it does not remove faecal matter from hands.
- iv. Hand hygiene facilities should be located at every strategic point in the facility e.g. entrance gate, reception, walkways, etc.
- v. The five (5) steps implementation strategy of WHO multimodal hand hygiene implementation strategy should be practiced in HCFs.²² The steps are;
 1. Facility preparedness (readiness for action)
 2. Baseline evaluation-establishing the current situation
 3. Implementation (introducing the improvement activities)
 4. Follow-up evaluation (evaluating the implementation impact)
 5. Action planning (review cycle-developing a plan for the next 5 years)

6.4 Quality assurance for hand hygiene compliance and sustainability in HCFs

- i. The IPC committee/WASH team/Focal person shall ensure adherence and compliance to hand hygiene practices by all staff, patients, carers and visitors in all areas of the HCFs where healthcare and related services are provided.
- ii. The HCF shall ensure regular capacity building of the IPC Committee/WASH team/Focal Person. Relevant tools for monitoring of hand hygiene compliance (eg WHO hand hygiene self-assessment framework²³) should be provided.
- iii. In addition, the IPC committee/WASH team/Focal person shall see to the development of operational plans and ensure that all relevant materials, supplies and tools for implementing hand hygiene guidelines are put in place.
- iv. Each HCF according to its working environment, should adopt a behaviour change and communication model that will contribute towards improving hand hygiene practices by all.

6.5 Monitoring Hand Hygiene practices in HCFs

Monitoring hand hygiene practices in HCFs should be based on the indicators provided by WHO/UNICEF as contained table 5 below

²²<https://www.ncbi.nlm.nih.gov/books/NBK144032/>

²³WHO Hand hygiene assessment framework-[https://cdn.who.int/media/docs/default-source/integrated-health-services-\(ihs\)/hand-hygiene/monitoring/hhsa-framework-october-2010.pdf?sfvrsn=41ba0450_6](https://cdn.who.int/media/docs/default-source/integrated-health-services-(ihs)/hand-hygiene/monitoring/hhsa-framework-october-2010.pdf?sfvrsn=41ba0450_6)

TABLE 5: Monitoring Indicators for Hand Hygiene Services in HCFs

ELEMENT	MONITORING DEFINITION
Hand hygiene facilities	A hand hygiene facility is any device that enables staff and patients to clean their hands effectively, such as a sink with tap, water tank with tap, bucket with tap or other similar device. Alcohol based hand rub dispensers are also hand hygiene facilities, whether they are fixed or portable.
Functional	To be considered functional, hand hygiene facilities at points of care must have either alcohol based hand rub, or soap and water. If alcohol-based hand rub is used, healthcare staff may carry a dispenser around between points of care. To be considered functional, hand hygiene facilities at toilets must have soap and water available within 5m of toilets. Alcohol-based rub is not considered adequate for hand hygiene at toilet as it does not remove faecal matter from hands.
Points of care	Points of care are any location in the healthcare facility where care or treatment is delivered (e.g. consultation/examination rooms).
Within 5 meters of toilets	Hand hygiene facilities at toilets must be located not more than 5 metres from the toilets.



SECTION SEVEN: HEALTHCARE WASTE MANAGEMENT (HCWM) IN HEALTHCARE FACILITIES

7.1 Impact of poor healthcare waste management

Improper treatment and disposal of healthcare waste may pose health risks indirectly through the release of pathogens and toxic pollutants into the environment as enumerated below:

- i. The disposal of untreated healthcare wastes in landfills can lead to the contamination of drinking, surface, and ground waters if those landfills are not properly constructed.
- ii. The treatment of healthcare wastes with chemical disinfectants can result in the release of chemical substances into the environment if those substances are not handled, stored and disposed in an environmentally sound manner.
- iii. Incineration of waste has been widely practiced, but inadequate incineration or the incineration of unsuitable materials results in the release of pollutants into the air and in the generation of ash residue. Incinerated materials containing or treated with chlorine can generate dioxins and furans, which are human carcinogens and have been associated with a range of adverse health effects. Incineration of heavy metals or materials with high metal content (in particular lead, mercury and cadmium) can lead to the spread of toxic metals in the environment.
- iv. Poor management of healthcare waste potentially exposes healthcare workers, waste handlers, patients and the community at large to infection, toxic effects and injuries, and risks polluting the environment. Other potential infectious risks may include the spread of drug-resistant micro-organisms from healthcare establishments into the environment.

7.2 Types of waste

Out of the total amount of waste generated by healthcare activities, about 85% is general, non-hazardous waste comparable to domestic waste. The remaining 15% is considered hazardous material that may be infectious, chemical or radioactive.²⁴ Waste and by-products cover a diverse range of materials, as follows:

- i. Infectious waste: waste contaminated with blood and other body fluids (e.g. from discarded diagnostic samples), cultures and stocks of infectious agents from laboratory work (e.g. waste from autopsies and infected animals from laboratories), or waste from patients with infections (e.g. swabs, bandages and disposable medical devices)

²⁴WHO 2018, Healthcare waste. World Health Organization, Geneva

- ii. Sharps waste: syringes, needles, disposable scalpels and blades, etc.;
- iii. Chemical waste: for example, solvents and reagents used for laboratory preparations, disinfectants and heavy metals contained in medical devices (e.g. mercury in broken thermometers) and batteries;
- iv. Pharmaceutical waste: expired, unused and contaminated drugs and vaccines;
- v. Cytotoxic waste: waste containing substances with genotoxic properties (i.e. highly hazardous substances that are mutagenic, teratogenic or carcinogenic), such as cytotoxic drugs used in cancer treatment and their metabolites;
- vi. Radioactive waste: such as products contaminated by radionuclide including radioactive diagnostic material or radio therapeutic materials.
- vii. Non-hazardous or general waste: waste that does not pose any particular biological, chemical, radioactive or physical hazard

Table 6: Classification, description, and examples of healthcare waste classes

CLASSIFICATION AND DESCRIPTION	EXAMPLES
NON-HAZARDOUS	
Class 1: NON-RISK GENERAL WASTE Similar to normal household municipal waste and can be managed by the municipal waste services.	Paper, cardboard, plastic, kitchen waste, ash, sawdust, pieces of wood segregated from hazardous waste at the point of generation
HAZARDOUS	
Class 2: INFECTIOUS WASTE Generated by both inpatients/out-patients or animals, this waste is known or likely to contain pathogenic micro-organisms and can be dangerous or infectious to both patients, healthcare workers and the public. It therefore requires special management both inside and outside the hospital.	Laboratory waste, materials potentially infected blood, swabs, materials that have been in used in surgery or been in contact with patients.
Class 4: PATHOLOGICAL / ANATOMICAL Includes amputations and other body tissues resulting from surgical operations, autopsy (post-mortem), or delivery. Requires special treatment for ethical and aesthetic reasons.	Internal body organs, amputated limbs, placentas, foetus. Also includes urine and blood products.
Class 5: CHEMICAL, PHARMACEUTICAL, GENOTOXIC WASTE Wastes, including expired products, generated from the pharmacy, radiology and from chemotherapy.	Vials, connecting tubing, drugs, vaccines, pharmaceutical products, disinfection solutions.
HIGHLY HAZARDOUS	
Class 3: SHARPS These are sharp-edged wastes that can cause cuts or puncture wounds (e.g. needle stick injuries). They are hazardous whether or not they are contaminated with blood. They must be segregated, packaged, and handled with specific procedures within the health facility.	Needles, syringes, surgical blades, scalpels, test tubes, ampoules, glass instruments, pipettes.

Class6: HIGHLY INFECTIOUS These highly infectious wastes required immediate treatment by chemical disinfectants or autoclaving before joining the hazardous HCW stream.	Sputum cultures of TB laboratories, contaminated blood clots and glassware, highly concentrated microbiological cultures carried out in medical analysis laboratories.
Class 7: RADIOACTIVE WASTE Any solid, liquid, or pathological waste contaminated with radioactive isotopes of any kind	Radioactive papers, gloves, cotton swabs, needles (sharps), liquid-patient excretion, spent radiation sources radium needles.

7.3 Healthcare Waste Management Services

To provide Healthcare Waste Management Services in HCFs the following conditions must be satisfied.

7.3.1 Healthcare waste segregation

- i. At least three clearly labelled and colour-coded bins should be in place to separate 1: Non-infectious / general waste (Black) 2: infectious waste (Yellow) and 3:highly infectious waste (Red).For other categories of waste e.g. pharmaceutical, radioactive, other chemical waste, an additional colour coded bin (brown) with relevant signage is recommended.
- ii. Bins should not contain waste other than that corresponding to its label, and should not be more than three quarters (75%) full before disposal.
- iii. Bins should be appropriate to the type of waste they are to contain; sharps containers should be puncture-proof and others should be leak-proof. Bins for all waste should have tight fitting lids and corresponding bin liners.

7.3.2 Colour Code

Healthcare waste is put in plastic bags (bin liners), metal containers, and hard plastic barrels and bins which should be colour coded. For efficiency purposes, all waste containers in the same stream should be the same colour. If there are small bins in examination rooms for infectious waste and those bins are red, then the larger containers for infectious waste should also be red, and the drums or boxes in the storage area for infectious waste should also be red. If you use black for non-hazardous waste, use black in all such containers throughout the facility.

Table 7: Classification and colour-coding of Healthcare Wastes

Category	Examples	Colour of bin & liner	Marking
General/non-infectious	Paper, packaging materials, Plastic bottles, food, cartons	Black	No recommended marking
Infectious	Gloves, dressings, blood, body fluids, used specimen containers	Yellow	 BIOHAZARD
Highly infectious or anatomical/pathological	Laboratory specimens and containers with biological agents, anatomical waste, pathological waste	Red	 BIOHAZARD
Chemical	Formaldehyde, batteries, photographic chemicals, solvents, organic chemicals, inorganic chemicals	Brown	Marking will vary with classification of the chemical
Radioactive	Any solid, liquid, or pathological waste contaminated with radioactive isotopes of any kind	Yellow	 Radioactive symbol

Source; Environmental Protection Agency (EPA), (1997)

7.3.3 Treatment and disposal

Appropriate Infection, Prevention and Control (IPC) measures should be observed in the collection, transportation and treatment of healthcare waste within and outside the HCF.

Waste should be safely treated and disposed appropriately using any of the following approved methods:

- Incineration: municipal solid waste, hazardous waste, and medical waste
- Autoclaving: Used medical sharps and sharps containers, Bloody bandages or gauze. Masks or gowns (worn by doctors or patients)
- Burial in a lined, protected pit: Contaminated biomaterials
- Collected and transported off-site for medical waste treatment: By incineration and Land disposal off-site

NOTE: Healthcare Wastes should not be treated in any of the following ways:

- Open dumping
- Open burning and
- Any other way that can impact negatively on the environment

7.3.4 Accessibility of bins

Waste bins should be properly located at every point of care, hand-washing stations, toilets and where other services are rendered in the HCFs

7.3.5 Management of Wastewater

Managing wastewater and faecal sludge in HCF the following guidelines should be followed:

- (i) Treat wastewater from HCFs before final disposal. The treatment should be either onsite by using septic tanks and soak way pit or offsite by using waste water treatment systems
- (ii) Pour flush toilets should be connected to inspection chambers, septic tanks and soak way pit.
- (iii) For HCFs where the wastewater treatment plant is not available, contaminated liquids should be disinfected with chlorine before final disposal.
- (iv) Drainage systems should be installed for management of ablution waste for all Healthcare delivery points, lavatories, sluice rooms, laundry, and at any other points where grey water is produced.
- (v) Ablution waste drains should be centralized or detached depending on the complexity of the facility infrastructure and the health and safety risks involved.
- (vi) Wastewater from hand washing points should be disposed in simple ground seepage systems.
- (vii) The wastewater from delivery rooms, dressing rooms, and other places where invasive procedures should be channelled to appropriate soak-away pits / sewage treatment systems.
- (viii) For HCFs located in urban areas, the most appropriate option for wastewater disposal is connection to the existing sewer systems.
- (ix) Provide proper faecal sludge emptying methods for HCFs with on-site sanitary facilities

7.3.6 Monitoring Indicators for Healthcare Waste Management Services in HCFs

Monitoring healthcare waste management should be based on the indicators provided by WHO/UNICEF as contained in table 8 below.²⁵

TABLE 8: Monitoring Indicators for Basic Healthcare Waste Management Services in HCFs

ELEMENT	MONITORING DEFINITION
Safely segregated in consultation area	At least three clearly labelled or colour coded bins should be in place to separate (i) sharps waste, (ii) infectious waste, and (iii) non-infectious general waste. Bins should be no more than three quarters (75%) full, and each bin should not contain waste other than that corresponding to its label. Bins should be appropriate to the type of waste they are to contain; sharps containers should be puncture-proof and others should be leak-proof. Bins for sharps waste and infectious waste should have lids. Consultation areas are rooms or areas within the healthcare facility where care or treatment is delivered.
Treated and disposed of safely	Safe treatment and disposal methods include incineration, autoclaving, and burial in a lined, protected pit. Wastes may also be collected and transported off-site for medical waste treatment and disposal. Fence off of areas if treatment and disposal is happening on site
Transportation and handling of healthcare waste	Appropriate Infection, Prevention and Control measures (IPC) should be observed in the collection, transportation, treatment and disposal of medical waste in and outside the HCFs. Provide appropriate PPE for those handling waste

²⁵WHO/UNICEF JMP 2019



SECTION EIGHT: ENVIRONMENTAL CLEANING IN HEALTHCARE FACILITIES

8.1 Environmental Cleaning and Disinfection

Environmental cleaning refers to the cleaning and disinfection of environmental surfaces (for example, bed rails, call buttons, chairs), floors, bathrooms and the management of spills of blood and body fluids, and surfaces of non-critical patient care equipment (for example, IV poles, stethoscopes).

This practice plays a critical role in preventing the transmission of Healthcare Associated Infections (HAI) because, some of the pathogens linked with HAI can survive for months on surfaces.

8.2 Environmental Cleaning Services for Healthcare facilities

To provide Environmental Cleaning services in HCFs, the following conditions must be satisfied:

8.2.1 Environmental Cleaning Protocol

Each HCF should establish environmental cleaning protocol that describe the required type and frequency of cleaning for different purposes, who is responsible for doing the cleaning, and how cleaning should be performed and recorded.

8.2.2 Standard Operating Procedures (SOP)

Each HCF should develop written protocols that specify the tools and materials that should be used for each type of cleaning and provide step-by-step instructions on the process. SOPs should also describe preparatory steps, including the use of personal protective equipment.

8.2.3 Cleaning Staff and Capacity Building

Each HCF should engage adequate number of cleaning staff and put in place regular structured training plans or programs for the staff. Emphasis to be placed on appropriate cleaning methods, standard dilution methods of cleaning agents, use of dedicated colour-coded equipment, based on risk stratification of healthcare areas to be cleaned with effective supportive supervision.

8.2.4 Environmental Cleaning Supplies and Equipment

The selection, care, safe storage and appropriate use of supplies and equipment is critical for effective environmental cleaning. These should include but not limited to:

- I. Cleaning and disinfection products (for example, detergents, disinfectants)
- II. Reusable/disposable supplies and equipment
- III. Personal Protective Equipment (PPE) for the cleaning staff
- IV. Access to sufficient quantities of clean / safe water

8.3 Monitoring of Healthcare Environmental Cleaning Services in HCFs

Monitoring environmental cleaning services in HCFs should be based on the indicators provided by WHO/UNICEF as contained table 9a below

Table 9a: Monitoring of Healthcare Environmental Cleaning Services in HCFs

SERVICE ELEMENT	BASIC INDICATORS	EXAMPLE OF INDICATORS				
		Availability	Accessibility	Acceptability	Quality	Others
Environmental Cleaning	i. Availability: Protocol in place.	-location and number of cleaning station	Yes/No	Yes/No	-cleaning frequency	
	ii. Quality : Staff trained.	-presence of cleaning supplies, including disinfectant			-observed cleanliness -cleaning methods	

SOURCE: WHO/UNICEF JMP, 2019

8.3.1: Monitoring Indicators for Environmental Cleaning Services in HCFs

Valuable starting point for monitoring environmental cleaning in HCFs should be based on the indicators provided by WHO/UNICEF as contained table 9b below

TABLE 9b: Indicators providing valuable starting point for monitoring of Environmental Cleaning services in HCFs

ELEMENT	MONITORING DEFINITION
Protocols for cleaning	Protocols should include: - Step-by-step techniques for specific tasks, such as cleaning a floor, cleaning a sink, cleaning a spillage of blood or body fluids. - A cleaning roster or schedule specifying the frequency at which cleaning tasks should be performed
Staff with cleaning responsibilities	Includes non-health care providers, such as cleaners, whose tasks include cleaning, as well as health care providers who, in addition to their clinical and patient care duties, are responsible for cleaning
Training	Training refers to structured training plans or programs led by a trainer or appropriately qualified supervisor.

SOURCE: (WHO /UNICEF JMP 2018)

9

SECTION NINE: MONITORING OF WASH IN HEALTHCARE FACILITIES

The aim of monitoring WASH services in HCFs is to measure the extent to which recommended standards by the Guidelines are complied with and identify gaps for necessary intervention. Effective monitoring, documentation and reporting will provide needed information to measure the Country's progress towards achieving the targets of SDGs on WASH by 2030.

9.1 Co-ordination and Monitoring Procedure

To achieve the intended purpose of developing this guideline, Standard Monitoring processes are hereby provided for and shall be put in place at various levels of the Government (Federal, State and Local).

- i. FMOH, shall Co-ordinate, and in collaboration with other relevant MDAs, Development partners, NGOs, develop standard monitoring tools in line with the WHO/UNICEF Standards for monitoring WASH services in HCFs and deployed to the States and LGAs WASH departments as well as WASH units in the HCFs.
- ii. WASH department in the State Ministry of Health will be advised to use the monitoring tools for periodic monitoring/assessment of the HCFs under the States and the LGAs.
- iii. LGAs WASH departments/units (where they exist and as applicable in respective states) and the Primary healthcare departments will use the tools to periodically monitor the primary HCFs in their jurisdiction.
- iv. WASH team shall be the Focal Point at the facility level and will conduct monitoring of WASH services and facilities on routine basis.
- v. FMOH, in collaboration with other relevant MDAs, shall use the Standard tool to conduct periodic monitoring of WASH services in the HCFs across the country.

9.2 Reporting Procedure

Reporting shall be a bottom-up format with verification mechanism in place.

- i. The WASH team in the HCFs shall report to the Head of the facility, through the IPC team/committee, in line with the national IPC policy.
- ii. Following existing reporting platform for healthcare services at LGA, state and federal levels, the head of the facility shall provide periodic report as required. .
- iii. The states shall verify the report and forward to the Federal Ministry of Health (FMOH)
- iv. The FMOH will verify the report and send to National Health Management Information System (NHMIS) and any other relevant information platform and stakeholders.
- v. There shall be annual report of WASH services in HCFs from the generated data

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APPENDIX 1

3.0 SECTION THREE: LEGAL AND INSTITUTIONAL FRAMEWORK FOR WASH IN HEALTH CARE FACILITIES IN NIGERIA

This chapter provides insight to policies, programmes, strategies and legislations that corroborate multi-sectoral nature of WASH.

3.1 Related National Legislations

3.1.1 National Health Act 2014

This Act provides a framework for the regulation, development and management of a national health system and set standards for rendering health services in the Federation, and other matters connected therewith.

3.1.2 Nigeria Center for Disease Control Act (NCDC Act 2018)

This Act was enacted to establish the Nigeria Center for Disease Control and Prevention, for the prevention, detection, investigation, monitoring and control of communicable disease in Nigeria and for related matters.

3.1.3 National Primary Healthcare Development Agency Act (NPHCDA 1992)

National Primary Healthcare Development Agency (NPHCDA) established to provide technical direction for development of PHC in Nigeria thereby making PHC services available to all in Nigeria.

3.1.4 National Environmental Standards and Regulations Enforcement Agency (NESREA), Act 2009 charged with responsibility for the protection and development of the Environment in Nigeria, and for other Related Matters.

3.1.5 National Environmental (sanitation and Waste Control) Regulation 2009

The regulations purpose is to adopt sustainable and environment friendly practices in environmental sanitation and waste management to minimize pollution.

3.1.6 National Environmental Health Practices Regulations, 2016: These regulations intend to prevent and abate nuisances, protect and promote physical and social well-being of the public, prevent and control incidences of communicable diseases through environmental health interventions, reduces environmental hazards to health, promote the general welfare of the public by regulating the sanitary construction and sanitation of all premises, and regulate private and public sector collaboration for purposes of Maintaining adequate sanitation and promotion of public health and safety.

3.1.7 Environmental Health Officers Registration Council of Nigeria (EHORECON) ACT, 2002 Charged with the responsibility of registering and licensing the Environmental Health practitioners in the country and regulate the practice of Environmental Health in Nigeria.

3.2 Related Sectoral National Policies

3.2.1 National Health Policy 2016

The policy spelt out many actions that require inter-sectoral and multi-sectoral collaboration to ensure Nigeria health system is significantly strengthened to improve the health status and wellbeing of Nigerians and the achievement of the health-related SDGs and Universal Health Coverage (UHC). One of the objectives is to

promote universal access to safe drinking water and acceptable sanitation to reduce the disease burden resulting from unsafe water and poor sanitation.

3.2.2 National Rural Water Supply and Sanitation Policy 2000

The objective is for all Nigerians to have access to adequate, affordable and sustainable sanitation through the active participation of Federal, State and Local Governments, NGOs, Development Partners, Private sector, communities, households and individuals.

(<https://cheld.org/wp-content/uploads/2012/04/National-Water-Sanitation-Policy.pdf>)

3.2.3 National Healthcare Waste Management Policy 2013

The Policy was developed to address environmental and health problems associated with poor management of healthcare waste and provide roadmap to safe healthcare waste management practices in all Healthcare facilities in Nigeria.

3.2.4 National Environmental Sanitation Policy 2005

The major thrust of the National Environmental Sanitation Policy is to ensure sound Environmental Sanitation Practices that shall promote sustainable development, public health and good quality of life. The policy is implemented through its National Guidelines on Sanitary Inspection of premises, Solid Waste Management, Excreta and Sewage Management, Market and Abattoir Sanitation; Pest and Vector Control, School Sanitation, Food Sanitation and adequate potable water supply. One of the objectives of the policy is to prevent sanitation related diseases, illnesses and injuries thus reduce poverty and increase life expectancy.

3.2.5 National Water Resources policy and strategy 2016

The main policy objective is to foster the integrated management of water resources for optimum, sustainable, efficient, and equitable water resources development and management in order to meet the current and future user water demand, conserve the water quality and protect the environment. This is to be done in an integrated manner involving all the stakeholders particularly governments at all levels, the communities, the private sector and civil society organizations. It is also hoped that the policy will lay the foundation for Post 2015 Development Agenda from Millennium Development Goals (MDG's) to Sustainable Development Goals (SDG's) where universal coverage for Water and Sanitation should be achieved by 2030.

3.2.6 National Health Promotion Policy 2019

3.3 Related National Strategies

3.3.1 National Health Strategic Development Plan II (NHSDP II) -2018-2022

The document was produced to provide blueprint for realization of SDG's health related targets and overall well-being of Nigerians.

3.3.2 Partnership for Expanded Water Sanitation and Hygiene (PEWASH) by FMWR, PEWASH – partnership for expanded water supply sanitation and hygiene programme strategy 2016. The over-arching goal of the Partnership for Expanded Water Supply, Sanitation and Hygiene (PEWASH) programme is to contribute to improvements in public health and eradication of poverty in Nigeria through equitable and sustainable WASH interventions. Water and Sanitation are critical factors in human development and economic growth, and therefore central to the achievement of the Sustainable Development Goals (SDG). Nigeria is committed to attaining the SDG-6 targets for water and sanitation by 2030. The PEWASH programme is specifically aimed at achieving SDG-6.1 and 6.2 targets in the rural areas through a multi-sectoral partnership while supporting the empowerment of rural dwellers in Nigeria.

3.3.3 Clean Nigeria Campaign Proposal

The aim of the hygiene behaviour change “Clean Nigeria: use the toilet” campaign is to get 47 million Nigerians to use the toilet and stop open defecation.

3.3.4 National Environmental Sanitation Action Plan - FMENV

3.3.5 Clean and Green Programme – FMENV: Launched in 2016 with one of its aims geared towards a clean Nigeria and a target to end open defecation by 2025.

3.3.6 National hygiene promotion strategy - Nigeria National strategy for the promotion of sanitation and hygienic behaviour among individual, household, communities, schools and markets.

3.3.7 National water resources road map 2016

The Government of Nigeria is committed to end open defecation in the country by 2025 which is in line with the revised global target set by the United Nations. Towards this end, FMWR requested UNICEF, Nigeria to undertake the development of a road map for making Nigeria open-defecation free by 2025.

3.3.8 Protocol for verification and certification of ODF and Total Sanitation Communities and Rural markets in Nigeria. 2017

3.3.9 Strategies for scaling up Rural Sanitation and Hygiene in Nigeria 2007

3.3.10 Water Sanitation and Hygiene - National Outcome Routine Mapping (WASH-NORM) survey 2019

3.4 Institutional framework

Water, Sanitation and Hygiene (WASH) is a global concept that is implemented by all tiers of government of the federation (Federal, State and LGAs) using collaborative approach.

WASH is multi-sectoral which involves the collaboration of several MDAs, NGOs and Development Partners that play concerted roles in the implementation of various aspects of WASH Services in Nigeria. These organizations include: Federal Ministry of Health (FMOH), Federal Ministry of Water Resources (FMWR), Federal Ministry of Environment (FMEnv), Federal Ministry of Education, WHO, UNICEF, Water Aid and other Non-Governmental Organizations.

FMOH is saddled with the responsibilities of developing and implementing Policies, Programmes, Strategies, Guidelines etc of which WASH programme is an integral component in the realization of SDG 3 and SDG 6 (Good Health and Wellbeing and Clean Water and Sanitation) respectively.

FMWR also play critical roles in the development, implementation and coordination of various programmes and strategies in the WASH sector.

Federal Ministry of Environment also a major stakeholder in WASH saddled with the responsibility of coordinating National Sanitation with the following objectives:

- i. To achieve a clean and healthy environment
- ii. Developing, implementing and enforcing Environmental Sanitation policies, Laws, regulations, guidelines and standards. These are implemented through the following: solid Waste Management, Excreta and sewage management, school sanitation, sanitary inspection of premises (EHS), Food Sanitation and Hygiene, Market and Abattoir sanitation, pest and vector control, ensuring availability of potable water, weed and vegetation control, environmental sanitation and hygiene education etc.

The collaboration in the WASH sector is the momentum that drives programmes and activities of WASH in the country, bringing all the stakeholders to a common goal and target.

The Development Partners, WHO, UNICEF, WaterAid etc. provide technical and financial support giving WASH sector in Nigeria and International Standard.

CONTRIBUTORS

NAME	ORGANISATION / DEPT	DESIGNATION / FUNCTION
Pharm. M.O. Lawal	Fed. Min. of Health/Food and Drug Services Department	Director, Food and Drug and Services Department
Mr. Fubara Chuku	Fed. Min. of Health /Food and Drug Services Department	Director, Food and Drug and Services Department
Pharm. Olubukola Ajayi	Fed. Min. of Health /Food and Drug Services Department	Director, Food and Drug and Services Department
Pharm. Olubunmi Aribéana	Fed. Min. of Health /Food and Drug Services Department	Director, Food and Drug and Services Department
Pharm. Ologun Taiye Joseph	Fed. Min. of Health /Food and Drug Services Department	Director, Pharmaceutical Services Division
Shaibu B.A.	Fed. Min. of Health /Public Health Department	Director, Climate Change
Engr. Francisca Iwuji	Fed. Min. Works & Housing	Director, Civil Engineering Services Department
Engr. C.S.O Nwufé	Fed. Min. Works & Housing	Director, Civil Engineering Services Department
Celine Onukwo	Fed. Min. of Health /Food and Drug Services Department	Deputy Director, Drug and Vaccine Development
Mr. Atanda O. John	Fed. Min. of Health /Food and Drug Services Department	National Coordinator, Food, Chemical, Cosmetics and Water Safety Management Programme
Mr. Baruwa Etti .O.O.S	Fed. Min. of Health /Food and Drug Services Department	Head, Water Safety Management Programme
Mr. S. Olanrewaju	Fed. Min. of Health /Food and Drug Services Department	Head Chemical Safety Management Programme
Madu Ezioma	Fed. Min. of Health/Family Health Department	Assistant Director, Health Promotion Division
Mr. Ajose Adeyemi	Fed. Min. Water Resources	Assistant Director, Water Quality and Surveillance
Mr. Musa Dayemi	Fed. Min. Water Resources	Chief Scientific Officer, Water Quality and Surveillance
Dr. Abiodun Ogunniyi	Nigeria Centre for Disease Control	Assistant Director/Head, Infection , Prevention and Control Unit
Dr. Ejezie Obiefuna	Nigeria Centre for Disease Control	Assistant Director, Surveillance Unit, MBBS, FTCE
Tahir Mustapha	Nigeria Centre for Disease Control	
Michael Forson	UNICEF	WASH Manager
Mr. Job Ominyi	UNICEF	Water, Sanitation and Hygiene Officer, Hygiene Promotion and WASH in Institutions in Nigeria
Mrs. Okea Rita	Fed. Min. of Environment	Assistant Director, Environmental Health and Sanitation
Aghogho O. B. Gbesere	Fed. Min. of Environment	
Dickson Akoh Silas	Fed. Min. of Environment	
Mr. Francis E. Ibeke	Fed. Min. of Health/Hospital Services Department	

Engr. Patrick Ani	Fed. Min. Works & Housing	
Mr. Obasi Chimaroke	Fed. Min. of Health /Public Health Department	
Dr. Edwin Isotu	World Health Organisation	National Consultant, Public Health and Environment
Mr. Kolawole Banwo	WaterAid Nigeria	Head, Advocacy, Policy and Communications
Wandoo Akosu	WaterAid Nigeria	Bauchi State Lead and Sanitation Focal Person
Dr Iloma U. Richard	Rivers State College of Health Science and Management Technology, Port Harcourt	Senior Lecturer
Mohammed .M. Manga	Federal Teaching Hospital Gombe	Consultant / Infection, Prevention and Control
Abubakar Abiso Moh'd	University of Maiduguri Teaching Hospital Maiduguri	Consultant / Infection, Prevention and Control
Amasiani Rose N.	Anambra State Ministry of Health	WASH Lead
Nwagwu Joy N.	Enugu State Ministry of Health	WASH Lead
Ahmed Mai Bukar	Federal Medical Centre Jalingo	Infection, Prevention and Control Focal Person
Bobga Pavali	Taraba State Ministry of Health	Infection, Prevention and Control Focal Person
Anyakoha Uche	Federal Medical Centre Owerri	Head Environment
Isiyaka Isiyaku	Katsina State Primary Healthcare Development Agency	Director, WASH
Abubakar Umar Maiha	Adamawa State Primary Healthcare Development Agency	Secretary
Aminu Ado Taura	Federal Medical Centre Jigawa State	Assistant Director, Environmental Health
Anyakoha Uche	Federal Medical Centre Owerri	Head Environment
Philomina Nwobosi	Fed. Min. of Health /Food and Drug Services Department	
Mr. Okoye O. Boniface	Fed. Min. of Health /Food and Drug Services Department	
Mr. Magayaki Joshua	Fed. Min. of Health /Food and Drug Services Department	
Mr. Isaac Ibrahim	Fed. Min. of Health /Food and Drug Services Department	
Ms. Biate Azibataram	Fed. Min. of Health /Food and Drug Services Department	
Mr. Kasim Muhammad	Fed. Min. of Health /Food and Drug Services Department	
Ms. Jack E. A. Mirian	Fed. Min. of Health /Food and Drug Services Department	
Bishara Emmanuel	Fed. Min. of Health/Hospital Services Department	
Dr. Chris Elemuwa	National Primary Healthcare Development Agency	Ag HOD, Community Health Services Department

