National Strategy for Water, Sanitation and Hygiene-Infection Prevention and Control in Healthcare Facilities

MINISTRY OF HEALTH

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NATIONAL STRATEGY FOR WASH-IPC IN HCFS

FEBRUARY, 2020

FOREWORD

Water, Sanitation and Hygiene (WASH) in Healthcare Facilities has in recent years become critical in ensuring that patients have an improved experience of care, delivered by care givers in a safe and a clean environment that ensures a reduction in hospital-associated infections. The Ministry of Health, working with partners in response to current global and local health dynamics of emerging and re-emerging diseases, is mindful of the need to ensure that WASH facilities in healthcare facilities are available and managed in accordance with best practice.

This strategy has been developed taking into cognisance the Medium-Term Development Framework of Ghana 2018-2021, revised National Health Policy (NHP, 2020), the Universal Health Coverage (UHC) Road map for Ghana (2020-2030), the African Union Vision 2063 and the United Nations Sustainable Development Goals. The strategy ensures that the relevant objectives in these national and international policy documents have been considered.

Stakeholders in the health and WASH sectors were consulted at various stages of development. International partners working in the health sector with relevant knowledge in WASH in Healthcare Facilities including UNICEF and the World Health Organisation made technical contributions to the development of this strategy.

It is the desire of the Ministry of Health that stakeholders at all levels will be guided by the strategy in all health sector- related infrastructure and service delivery arrangements. The strategy is expected to be implemented by all partners in line with the Health-in-All and the One Health Policy Frameworks.

HON. KWAKU AGYEMAN-MANU (MP)
MINISTER FOR HEALTH

ACKNOWLEDGEMENTS

The Ministry of Health acknowledges the political leadership of the Ministry led by the Honourable Minister for Health, Kwaku Agyeman-Manu under whose leadership the WASH-IPC in Healthcare Facilities (HCF) Strategy was developed. The Chief Director and the Director for Policy Planning, Monitoring and Evaluation also played key roles in the development of the Strategy.

The Technical Working Group made up of selected stakeholders worked closely with the consultant in refining the scope and ensuring the inputs of stakeholders are incorporated in the strategy. The members of the working group included representatives of different units of the Ministry of Health, Ghana Health Service, Teaching Hospitals, Christian Health Association of Ghana (CHAG), Ministry of Sanitation and Water Resources, Ghana Water Company Limited, UNICEF, WHO, etc.

The pressure brought to bear at each Health Summit has played a key role in ensuring the process of developing the strategy was on course. There were many challenges along the way but the need to ensure the strategy was ready as a key deliverable for the Health Summit helped push stakeholders to ensure its finalisation.

Special thanks go to Mr. Harold Esseku of Rapha Consult for leading and guiding the process by preparing the initial draft strategy and working with all the stakeholders, incorporating the various comments and finalising the document.

For funding the process of developing the strategy, special thanks go to UNICEF without whom the process will not have been completed.

A full list of all stakeholders and their institutions is provided in Annex 4.

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ABBREVIATIONS

CHAG	-	Christian Health Association of Ghana
CHPS	-	Community-based Health Planning and Services
DHIMS	-	District Health Information Management System
EPA	-	Environmental Protection Agency
FMP	-	Facilities Management Plan
GLSS	-	Ghana Living Standards Survey
GHS	-	Ghana Health Service
GSA	-	Ghana Standards Authority
HAI	-	Hospital-Associated Infection
HCF	-	Healthcare Facility
HCWM	-	Healthcare Waste Management
HeFRA	-	Health Facilities Regulatory Authority
HSMTDP	-	Health Sector Medium Term Development Plan
IEC	-	Information, Education and Communication
IPC	-	Infection Prevention and Control
KAPs	-	Knowledge Attitude and Practices
KVIP	-	Kumasi Ventilated Improved Pit Latrine
LCCA	-	Life Cycle Cost Approach
MHM	-	Menstrual Hygiene Management
MOH	-	Ministry of Health
M&E	-	Monitoring and Evaluation
MMDA	-	Metropolitan, Municipal and District Assemblies
MSWR	-	Ministry of Sanitation and Water Resources
NQSSC	-	National Quality Strategy Steering Committee
NHP	-	National Health Policy
NHA	-	National Health Account
NHWMP	-	National Healthcare Waste Management Plan
NMTDF	-	National Medium-Term Development Framework
O&M	-	Operation and Maintenance
PPE	-	Personal Protective Equipment
PWD	-	Persons with Disabilities

ABBREVIATIONS

QMU	-	Quality Management Unit
SDG	-	Sustainable Development Goal
SHA	-	System of Health Accounts
TWG	-	Technical Working Group
UHC	-	Universal Health Coverage
UNICEF	-	United Nations Children's Fund
WASH	-	Water, Sanitation and Hygiene
WHO	-	World Health Organisation

1 INTRODUCTION

1.1 Background

The Ministry of Health has developed a costed National Strategy for Water, Sanitation and Hygiene-Infection Prevention and Control (WASH-IPC) in health care facilities because hospital-associated Infections (HAIs) are important causes of morbidity and mortality. These infections have serious consequences for healthcare users. Some of the potential consequences include prolonged stay, loss of productivity, increased health expenditure and even death. These infections must be prevented to reduce cost of healthcare and to save lives. The availability of Water, Sanitation and Hygiene (WASH) services are critical in preventing HAIs and ensuring that health professionals provide quality health services which are in accordance with standards and protocols for Infection Prevention and Control (IPC). There is also patient satisfaction and dignity when adequate WASH services are in place and it ensures equity in the delivery of WASH services.

Many healthcare facilities lack adequate WASH infrastructure to support WASH service delivery. Inequities in access to health exist between regions and districts, and between the rich and poor throughout the country.

The Ghana Health Service (GHS) developed minimum standards for WASH in healthcare facilities in 2016. The Ghana Health Service has also developed guidelines for WASH in Healthcare Facilities through an assessment carried out in 2016. The national strategy builds on these guidelines.

National WASH in Healthcare Facilities (HCF) indicators have been developed and are in line with global indicators and will facilitate monitoring. The indicators will be used in data collection in all healthcare and allied health facilities and reported through the District Health Information Management System (DHIMS).

1.2 Context

One of the key functions of the Ministry of Health (MOH) is to:

> "Regulate registration and accreditation of health service delivery facilities as well as the training and practice of various health professions regarding standards and professional conduct."

The Infection Prevention and Control (IPC) programme of Ghana Health Service (GHS) has in the past concentrated mainly on training health service providers on infection prevention with limited focus on the need for WASH amenities and the related services. The GHS in 2016 decided to rename the IPC programme as the

WASH/IPC programme, taking cognisance of the fact that there cannot be IPC without efficient WASH services. The government of Ghana and key actors in the health sector have recognised the need to improve WASH-HCF. Subsequently, the Ministry of Health and Development Partners agreed to develop a national strategy for WASH-IPC in HCFs as captured in the Aide Memoire of the April 2017 Health Summit.

1.3 The Vision, Mission and Goal of the Health Sector

Vision: A healthy population for national development

Mission: Work towards the achievement of healthy lives for all people living in Ghana through an enabling policy framework that recognizes, empowers and brings together, in a coordinated manner, all stakeholders

Goal: To promote, restore and maintain good health for all people living in Ghana.

1.4 Objectives of the National Strategy

The objectives of the National Strategy for WASH-IPC in HCF are as follows:

- To provide the context and legal framework for WASH in HCFs in Ghana.
- To provide a framework for sustainable implementation of national guidelines and standards for WASH in HCFs at all levels.
- To integrate WASH in HCF into the existing M&E system of the Ministry of Health and other related sectors like Local Government and the National WASH M&E systems.
- To provide a Strategy for Sustainability & Scaling-up to meet National, Regional and Global Targets.

1.5 Benefits of Improved WASH in Healthcare Facilities

The benefits of improving WASH in healthcare facilities are varied and include the following:

- Health and Safety
  - Reduced healthcare associated infections
  - Reduced anti-microbial resistance
  - Improved occupational health and safety
- Disease Prevention and Treatment
  - Improved outbreak prevention and control (e.g. cholera)
  - Improved diarrhoeal disease prevention and control
- Staff Morale and Performance
  - Improved satisfaction and ability to provide safe care

  - Improved work place ambience
- People-centred Care
  - Increased uptake of services (facility births, vaccinations)
  - Improved experience of care
- Community WASH
  - Health staff model good hygiene behaviour
  - Improved hygiene practices at home
- Healthcare Costs
  - More efficient services to reduce cost of healthcare
  - Diseases/deaths averted
- Climate Change and Disaster Resilience
  - Facilities better prepared to continue to provide WASH in disasters, including climate-related events.

1.6 Strategy Development Process

The need for the WASH in HCF strategy became necessary in light of the emphasis placed on an improved experience of care and the awareness of the need to reduce hospital-associated infections among others. The Health Summit organised in 2017 recognised the importance of WASH in HCFs and set a target to have the strategy developed. The Ministry of Health brought together a technical working group with stakeholders in health and WASH sectors to brainstorm and to come up with the strategy. The process was facilitated by a consultant. A review of relevant national and international policies, strategies and goals was undertaken and formed the backbone of the process. The key stakeholders in the WASH sector were engaged in the review of the draft documents and the consultant finalised the strategy using the outputs of the workshops and specific comments from sector institutions.

1.7 Data Sources

The main data sources and the data obtained to inform the development of the national strategy include the following:

- **District Health Management Information Systems (DHIMS):** The DHIMS was updated specifically for the strategy. Data in the DHIMS is regularly collected and updated by personnel working in the districts and healthcare facilities across the country. The data was expected to include the coverage and functionality of WASH facilities, the state of the facility and the level of cleanliness as observed.

- **Assessment of WASH in Healthcare Facilities in Tatale-Sanguli and Kpandai Districts:** This report provides the national minimum standards for WASH in Health Facilities.
- **Cost for Achieving Minimum Standards:** A review of the costing framework developed for the national WASH in HCF standards was undertaken. Current costs were obtained by Quantity Surveyors using the standard estimating models. Reviews of the costs for recent projects in the WASH sector were also obtained and comparisons made. These costs were then adapted to suit the various scenarios.

2 POLICIES AND LEGAL FRAMEWORK

2.1 Legal Framework

The key laws and legislations relevant for WASH in healthcare facilities include the following:

2.2 Constitution of the Republic of Ghana, 1992

The constitution of the Republic of Ghana recognizes the right of all workers to work under safe and healthy conditions. Article Twenty-Four Clause One of the Constitution states that:

> "Every person has the right to work under satisfactory, safe and healthy conditions, and shall receive equal pay for equal work without distinction of any kind"

Health workers therefore need to work in an environment that is safe and healthy, and this includes ensuring water, sanitation and hygiene facilities are such that the risk of infections are eliminated or minimized to the lowest possible situation.

2.3 Coordinated Programme of Economic and Social Development Policies (2017 – 2024)

The Coordinated Programmes of Economic and Social Development Policies (2017 – 2024) is government's national policy framework themed "Agenda for Jobs: Creating Prosperity and Equal Opportunities for All".

2.4 The Civil Service Act, 1993 (PNDCL 327)

The object of the Service as enshrined in section 2 of the Act is to assist the Government in the formulation and implementation of government policies for the development of the country. The Act therefore mandates the Ministry of Health (MoH) to provide policy oversight over the heath sector of Ghana. This mandate is executed through the formulation of policies, monitoring and evaluation of health services and programmes, resource mobilization and allocation for health, human resource development and management as well as setting and regulation of standards.

The Ministry of Health, working in partnership with its agencies and stakeholders envisions to achieve "a heathy population for national development" by "working towards the achievement of heathy lives for all people living in Ghana through an enabling policy framework that recognizes, empowers and brings together in a coordinated manner all stakeholders.

The functions of health services implementation are performed by the Agencies of the Ministry of Health.

2.5 Ghana Health Service and Teaching Hospitals Act

The Ghana Health Service and Teaching Hospitals Act,1996 (ACT 525) established the Ghana Health service with an object of implementing approved national policies for the health delivery in the country; Increase access to improved health services; and manage prudently resources available for provision of health services.

The same act established the teaching hospitals with the object of providing advanced clinical health service to support the health services by the Service; to serve as a training ground for undergraduate and post graduate training in medical profession; and to undertake research into health issues for the purpose of improving the condition of health of people in the country.

> "The objects of the GHS are to: implement approved national policies for health delivery in the country; increase access to improved health services; and manage prudently resources available for provision of health services."

The GHS operates at five levels: national, regional, district, sub-district and community, and is governed by the Ghana Health Service Council that promotes collaboration with the MoH, Teaching Hospitals and other agencies, as well as proposes recommendations on health policies and programmes to the MoH.

2.6 Public Health Act

The Public Health Act, 2012 (Act 851), consolidates the laws relating to public health to prevent disease, promote, safeguard, maintain and protect the health of humans and animals and to provide for related matters.

The relevant sections of the Public Health Act which are relevant for WASH in HCF are as follows:

- Section 41 (1): *Protection of Water Receptacles*: This section is to ensure that water receptacles are managed in a manner that prevents any form of contamination.
- Sections 51-53: *Sale or serving unwholesome food; sale of food under insanitary conditions; and food unfit for human consumption*: These sections require that there are sanitary conditions in and around places where food is prepared and sold, and all food is prepared and handled in a wholesome manner to avoid contamination.
- Section 56: *Public Nuisance*: This section prescribes sanctions for any person that in any area or public place "causes or permits to be placed a carrion, filth, dirt, refuse, or rubbish, or any other offensive or otherwise unwholesome matter, on a street, yard, an enclosure, or open space except

at the places set apart by the local authority or the environmental health officer for that purpose."

- Sixth Schedule: *Patients Charter*: The Patients Charter states *inter alia* as follows:

> "Health facilities must therefore provide for and respect the rights and responsibilities of patients, clients, families, health workers and other health care providers. They must be sensitive to the patient's socio-cultural and religious backgrounds, age, gender and any other differences as well as the needs of patients with disabilities."

Other relevant sections which apply in the Public Health Act include:

- Section 17: Communicable diseases.
- Section 50: Hindering disposal of the dead.

2.7 Health Institutions and Facilities Act

The Health Institutions and Facilities Act, 2011 (Act 829), provides for the Health Facilities Regulatory Agency (HeFRA) to license and monitor facilities for the provision of public and private health care services, and other related matters.

The functions of the Agency include:

Section 4(c) Determine the basic and minimum equipment and personnel required for the type of service to be provided in a practice.

Section 4(d) Regulate and monitor activities in a practice to determine the adequacy and standard of heath care provided.

These provisions mandate the HeFRA to prescribe the basic equipment required to maintain the requisite WASH standards in all health care facilities. The provisions further mandate HeFRA to regulate and monitor the facilities to ensure that all activities carried out promote WASH in HCFs as applicable.

With respect to licensing of facilities, section 11 of Act 829 requires all persons operating facilities or specified equipment to be licensed under the Act. Section 12 sets out the process for application for licences and the conditions under which licenses are to be issued by the Agency. The section requires applications for licences to include plans for disposal of medical waste, list of types of services and equipment to be used and any other requirement specified by the Board.

2.8 National Health Policy

The National Health Policy (NHP) of 2020 provides policy direction for health development in the country. The policy recognises improvements in the health

and well-being of the Ghanaian population over the last three decades, and recognises that there is currently a complex disease burden to be borne by the country as health trends and lifestyles change. The policy further identifies the physical environment and population lifestyles as among factors that influence the health situation in Ghana.

The first objective of the policy is to strengthen the healthcare delivery system to be resilient. The policy thrust with respect to this objective is to develop a robust and sustainable healthcare delivery system with clear measurable standards in terms of safety, efficiency, effectiveness, equity and patient-centredness. A critical strategy set out in the policy is the availability and use of appropriate health technology/infrastructure. To this end, a focus is to be placed on modernisation/ re-tooling of existing facilities.

The policy objective of improving the physical environment identifies water, sanitation and hygiene, among others, as impacting the health of the Ghanaian population. Although the focus of the policy is primarily on the provision of access to potable water, and improved sanitation and hygiene facilities in households, the recognition of the impact of these issues on the health of the population shows an understanding of having such facilities available to ensure optimum health of the population.

2.9 Universal Health Coverage (UHC) Road Map for Ghana (2020-2030)

Ghana defines UHC as: "All people in Ghana have timely access to high quality health services irrespective of ability to pay at the point of use ". The roadmap has the following objectives;

1. Universal access to better and efficiently managed quality healthcare services
2. Reduce unnecessary maternal,adolescent and child deaths and disabilities
3. Increase access to responsive clinical and public health emergency services.

These objectives provide the framework for a concerted action to make health universally accessible to all persons living in Ghana by transforming our health systems, efficiently mobilise and apply domestic resources to need; and strategically leverage partners resources for long term sustainability.

2.10 Infection Prevention and Control Policy

The primary purpose of the Infection Prevention and Control (IPC) policy is to give directions to healthcare personnel and clients in preventing and controlling infections within healthcare settings. This is to ensure patient safety and the protection of health workers in the delivery of health service.

The National Infection Prevention and Control Unit was set up to "ensure that standards are adhered to in designing and constructing health facilities." They are

also responsible for providing Information, Education and Communication (IEC) on Infection Prevention and Control (IPC).

The IPC policy recognizes that failure to comply with the guidelines may result in increased mortality and morbidity. The implementation of IPC programmes includes educating and training health workers, protecting health workers and educating patients and relatives on IPC related to their condition.

The IPC policy has a section on Healthcare Waste Management (HCWM). Waste is classified as general waste, infectious waste and toxic waste and guidelines are given for each category of waste.

Some of the core principles and key issues of HCWM relating to WASH in HCF are:

- Polluter pays
- Hand washing and hygiene
- Use of personal protective equipment (PPE)
- Cleaning, sterilization and disinfection of Patient Care Equipment (water is required in adequate quantities to ensure this)
- Waste segregation
- Transport and disposal of all categories of hospital waste in an environmentally friendly and hygienic manner
- Healthcare facility environmental cleaning and disinfection.

The IPC Environmental and Engineering considerations include the following key issues which are critical for implementing WASH in HCF:

- Positioning/siting of sinks (for handwashing before and after each patient contact).
- Water supply system (wholesome and potable water should be easily available for various purposes).
- Waste management system (adequate within the guidelines provided).

2.11 Ghana National Healthcare Quality Strategy

The Ghana National Healthcare Quality Strategy (2017-2021) was launched in December 2016. The definition of quality adopted in the strategy is:

> "Healthcare quality is the degree to which healthcare interventions are in accordance with standards and are safe, efficient, effective, timely, equitable, accessible, client-centred, apply appropriate technology and result in positive health outcomes, provided by an empowered workforce in an enabling environment."

The ultimate goal of the strategy is:

> "To continuously improve the health and well-being of Ghanaians through the development of a better-coordinated health system that places patients and communities at the centre of quality care."

There is a National Quality Strategy Steering Committee (NQSSC) at the national level to guide the implementation of the National Healthcare Quality Strategy (NHQS). A National Quality Manager (NQM) and a Quality Management Unit (QMU) are housed in the MOH PPME to support the NQSSC.

Some of the key functions of the NQSSC include

- Decide and apply indicators for monitoring and implementation of quality plans, policies and health outcomes in priority areas.
- Define data requirements for the measurement of quality at the various levels of the health system.
- Provide guidelines/policy for compliance with data quality and reporting.
- Strengthen leadership and ownership among stakeholders in the health system on quality planning, quality assurance and quality improvement at all levels, in all sub-sectors and in all sector agencies.

2.12 Healthcare Waste Management

The Healthcare Waste Management Policy and Guidelines (HCWMP) is completed. The HCWMP states that approximately 75% of the waste generated in the provision of health care may be categorized as non-hazardous to be treated like household waste, while the remaining is hazardous and requires special arrangements for management. The structure of the draft document contains provision for various aspects of healthcare waste management including:

- Segregation
- Health Care Waste Financing

- Internal management of HCW
- External transport
- Treatment and disposal

The plan acknowledges the underfunded state of HCW management. It envisages that each institution will budget for management of waste in their annual plans, while capital items with huge financial outlays will be borne by government at national and local levels.

The HCWMP is based on WHO recommendations[1] and envisages separation of waste from health care facilities into general waste, infectious waste and sharps waste/pharmaceutical waste, pathological, chemical waste, etc. Waste should be separated in colour-coded bins. Transportation of hazardous health care waste could pose a public health risk, especially when done in open containers or tipper trucks. The plan, therefore, envisages that HCW will be collected and transported in accordance with the Waste Management Regulations of the Environmental Protection Agency (EPA). Treatment and disposal of HCW are to be based on the best environmental practices and cost considerations.

It is further envisaged that treatment technology such as autoclaves which have the capacity to treat large volumes of waste will be located in bigger health facilities to enable smaller facilities to utilize it for waste management when necessary.

2.13 Hazardous and Electronic Waste Control and Management Act

The Hazardous and Electronic Waste Control and Management Act, 2016 (Act 917) was enacted by Parliament in 2016 to provide for the control, management and disposal of hazardous and electronic waste.

Clause 13 of the Act states that:

(1) A person involved in the management of hazardous wastes or other wastes shall

(a) Take the steps that are necessary to prevent pollution from hazardous wastes and other wastes arising from the management; and

(b) Where pollution occurs, minimize the consequences of the pollution on human health and environment.

(2) The Agency shall ensure hazardous wastes or other wastes are not mixed with non-haxardous waste or other wastes unless the generator, collector, storer, transporter, or disposer proves that the mixing of the waste is environmentally sound.

[1] **WHO 2014 2nd edition, safe management of wastes from health care activities, World Health Organization, Geneva**

(3) The Agency shall not allow hazardous wastes or other wastes to be transported from the sites of generation unless

(a) the packaging and containers for the transport of the hazardous waste or other waste are labelled in a clearly visible form; and

(b) it is accompanied by the respective movement document.

2.14 National Medium-Term Development Framework

The National Medium-Term Development Framework (NMTDF) 2018-2021 dubbed *Agenda for Jobs: Creating Prosperity and Equal Opportunity for All is to:*

> "Create an optimistic, self-confident and prosperous nation, through the creative exploitation of our human and natural resources, and operating within a democratic, open and fair society in which mutual trust and economic opportunities exist for all."

The four main goals of the Framework are:

- Create opportunities for all Ghanaians;
- Safeguard the natural environment and ensure a resilient built environment;
- Maintain a stable, united and safe society; and
- Build a prosperous society.

The NMTDF states that:

"For the promotion of good health and delivery of efficient health services, the policy objectives over the medium term are: ensure affordable, equitable, easily accessible and universal health coverage; strengthen healthcare management systems; reduce disability, morbidity, and mortality; and ensure the reduction of new HIV and AIDS/STIs especially among vulnerable groups."

2.15 Health Sector Medium Term Development Plan

Key issues from the Health Sector Medium Term Development Plan (HSMTDP) include the following:

- IPC must be strengthened in all the seventy-one (71) health training institutions as relates to hygiene and operation and maintenance (O&M) of health facilities.
- Objective 4.5 of the HSMTDP which is on "Surgical site infection rate." Improvement in handwashing and hygiene practices can help eliminate this.
- Quality of Service Delivery and Care: Current service delivery infrastructure in most health facilities does not provide for client privacy and the lack of privacy affects women more than men.

- Communicable and Non-Communicable Diseases: Current interventions do little in ensuring gender sensitivity in the design and delivery of services.
- Under Health Service Delivery, the MOH seeks to "Develop/Update and implement a comprehensive health promotion and communication strategy." This update will include key messages on WASH.
- Under Regulation of Health Sector, the MOH seeks to "Ensure health facilities (public and private) infrastructure, equipment and health services meets defined standards." This will include ensuring the minimum standards are incorporated in all healthcare infrastructure developed in the country.
- The District Health Information Management System (DHIMS) is an electronic health information system used at all levels for recording, analyzing and reporting of information in the health sector. Primary data is collected at the household level, health facilities, institutions and offices by health staff.
- Monitoring Framework: The policy framework of the HSMTDP is based on the Sustainable Development Goals (SDGs). At the highest level, the sector will be assessed using the SDGs and this includes indicators on WASH in Healthcare Facilities.

2.16 Sustainable Development Goals

The tables below give the SDG targets, indicators, and definitions related to WASH in Healthcare Facilities.

2.16.1 SDG 3 – Health

TARGETS	DEFINITIONS	INDICATORS
3.1: By 2030, reduce the global maternal mortality ratio to less than 70 per 100,000 live births	Facilities with basic infrastructure and amenities, including water, sanitation, hygiene, electricity, waste disposal, a stock of essential medicines, supplies and equipment to meet the healthcare needs of women. Areas for labour, childbirth, and postnatal care that are hygienic, comfortable and organized to maintain equity and continuity of care	Maternal mortality ratio/ rate
3.2: Target 3.2 By 2030, end preventable deaths of newborns and children under 5 years of age, with all countries aiming to reduce neonatal mortality to at least as low as 12 per 1,000 live births and under-5 mortality to at least as low as 25 per 1,000 live births	Facilities with basic infrastructure and amenities, including water, sanitation, hygiene, electricity, waste disposal, a stock of essential medicines, supplies and equipment to meet the healthcare needs of newborns and under-5 children Areas for labour, childbirth, postnatal care, and child health services that are hygienic, comfortable and organized to maintain equity and continuity of care	Newborn and under-5 mortality rates

2.16.2 SDG 6 – Water and Sanitation

TARGETS	DEFINITIONS	INDICATORS
6.1: By 2030, achieve universal and equitable access to safe and affordable drinking water for all	Facilities where the main water source is improved and located on premises, with water available at the time of the survey	Proportion of health care facilities with *basic* water supply
6.2: By 2030 achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations	Facilities with improved toilets or latrines that are usable at the time of the survey, with at least one designated for women/ girls with facilities to manage menstrual hygiene needs, at least one separated for staff, and at least one meeting the needs of people with limited mobility Facilities with hand hygiene stations including a basin with water and soap, or alcohol-based hand rub, present at critical points of care and within 5m of toilets Facilities where waste is safely segregated in the consultation area, and infectious and sharps wastes are treated and disposed of safely Facilities which have protocols for cleaning, and staff with cleaning responsibilities have all received training on cleaning procedures.	Proportion of health care facilities with *basic* sanitation

2.17 Other Relevant Policies and Acts

Other relevant policies, studies and guidance documents in Ghana and across the continent which support private sector participation in water services delivery include the following:

- **National Water Policy** – describes the current policy for the entire water sector in Ghana. One of the policy objectives stated in the policy is to maximise health benefits through the integration of water, sanitation and hygiene education interventions.
- **Environmental Sanitation Policy** – provides the framework for environmental sanitation delivery in Ghana. The policy recognizes that sustaining environmental sanitation delivery has a great bearing on improving mortality/ morbidity as well as reducing pre- and post-natal risks. The policy also recognizes that improved environmental sanitation has direct benefits on healthcare waste management among others.
- **Local Governance Act, 2016 Act 936** – establishes the District Assembly as the Planning authority at the district level with responsibility for receiving and approving permits for physical development and social infrastructure including investments in water supply, sanitation, education and health.
- **Water Sector Strategic Development Plan, 2012** – outlines the investment and policy proposals required for achieving basic water access for all in Ghana by 2025. The plan recognizes the importance of ensuring all Ghanaians have access to basic water services to meet their basic needs.

3 STRATEGIES

The national WASH in HCF strategy revolves around four key areas. These are as follows:

- Minimum Standards and Guidelines for WASH in HCF
- Infrastructure and Costing for WASH
- Human Resources for WASH
- Funding and Sustainability for WASH.

3.1 Minimum Standards and Guidelines for WASH in Healthcare Facilities

To ensure a uniform and specific standards and guidelines for WASH in all health care facilities at all levels of care, the following minimum standards and guidelines shall apply:

WASH	MINIMUM STANDARDS
Water Supply	• Water must meet the water quality standards for Ghana as described in the Ghana Standards Authority (GSA) Water Quality standards. • Potable water must be available at all times in sufficient quantities within all treatment wards and in waiting areas. • Operating theatres and delivery rooms must be supplied with sufficient water at all times. • Facilities should adopt a risk management approach to ensure drinking-water is safe. • Drinking water is safely stored in a clean bucket or tank with a cover and tap. • *Water storage must meet at least two-day requirement of the facility.* • *Local treatment of water must use technology that meets WHO performance standards.*

WASH	MINIMUM STANDARDS
Sanitation	• Toilets must be located on the premises of the healthcare facility. • Where toilets are outside the building, location must be maximum 50m away from building. • Separate toilets should be provided for staff and patients. • Separate toilets should be provided for male and female patients. • Toilets must be accessible to all categories of users including males, females, children and persons living with disabilities. • Toilets should be regularly maintained and cleaned to ensure there is hygienic environment in and around the toilet at all times. • *The management of excreta and disposal of sludge/ wastewater should be done in a manner prescribed by the relevant local government authorities and/or should not pollute the environment.* • *At least one toilet for females must provide means for menstrual hygiene management.* • *At least one toilet must meet the needs of people with disabilities.*

WASH	MINIMUM STANDARDS
Hygiene	• Water point with soap or appropriate alcohol-based hand rubs in all treatment areas, waiting rooms and near toilets (maximum 5 m) for patients and staff. • Where water storage facilities are provided, the containers shall be kept clean and hygienic at all times. • Hygiene promotion shall be carried out regularly for all staff with a focus on infection prevention and control, hand washing and correct use of toilet facilities. • Hygiene promotion material must be clearly visible at all key locations. • Hygiene promotion shall be carried out by staff for the benefit of all patients and other care givers. • Hygiene promotion shall include changing of diapers and hygienic disposal of same.

Other	• Provision shall be made for proper and hygienic disposal of different categories of waste. Waste will be categorised as follows:
	  • Non-infectious (general) waste
	  • Infectious waste
	  • Sharps
	• Provision shall be made for bins for different categories of waste.
	• Provision shall be made for hygienic and environmental appropriate means for the transport and final disposal of all categories of waste.
	• All areas in a healthcare facility must be cleaned and maintained in a hygienic and environmentally friendly manner. This includes proper maintenance of lawns, trees, shrubs and hedges etc.
	• Provision shall be made for adequate disposal of grey water.
	• A designated area for changing babies should be provided and shall have hand washing station.

The minimum WASH/IPC requirements must be in place for all categories of healthcare facilities for the renewal of their operating and professionals practice licenses. These minimum WASH/IPC requirements will be strictly enforced by regulatory agencies (especially HeFRA and professionals' regulatory agencies) to ensure the public have confidence in all health facilities.

3.2 Infrastructure and Costing

WASH infrastructure development and maintenance is key in achieving the desired goal of this strategy. Infrastructure and Costing framework will therefore be based on initial capital investment, rehabilitation of existing structures and routine maintenance cost.

3.2.1 Capital Investment/Expenditure

All structures and facilities to be constructed in HCF shall be required to meet the minimum standards. Additionally, WASH experts must be involved in the process to ensure these standards. For existing HCFs, capital expenditure will have to be expended for new WASH facilities to ensure the minimum standards are incorporated.

The expenditure for new WASH facilities should typically include the following:

- Drilling and mechanization of a borehole
- Connection of water supply system to the facility
- Construction of water storage tank and/or rainwater harvesting system
- Construction of new toilet facilities
- Construction of hand wash basins and plumbing installations
- Provision of Veronica buckets
- Provision of refuse bins and storage area
- Provision of appropriate HCWM technologies
- Provision of on-site treatment system and connection to sewerage systems where available.

When WASH facilities are provided as part of the initial construction of a healthcare facility, the costs should be teased out when preparing the Bills of Quantities at the construction preparation phase. The costs obtained should be reported as prescribed in the Health Accounts.

3.2.2 Routine Expenditure

Routine expenditure will have to be disaggregated from the existing expenditure items of HCFs. Key examples of line items that need to be disaggregated include the following:

- Administrative costs: Paying of water, electricity and refuse collection bills, emptying of septic tanks/latrines, consumables for cleaning, janitorial services etc.
- Transportation costs: Fuel, lubricants and maintenance.
- Maintenance costs: Minor maintenance and rehabilitation of WASH facilities.
- Human resources costs: Remuneration of personnel responsible for plumbing, basic O&M of structures, hygiene, sanitation and health care waste.
- Hygiene promotion costs: Cost of hygiene promotion for staff, patients, family members etc. who use the facility as workers, patients or caregivers should be considered.
- Other costs: Water quality monitoring etc.

3.3 Human Resources Requirements for WASH in HFCs

The challenges of meeting the human resource requirements in the WASH sector are staff attrition, government restriction on employee recruitment, unattractive working conditions in the sector and lack of suitably qualified candidates. To address these issues, the following strategic interventions will be considered:

- Training of technical personnel for the WASH in health care facilities should be a high priority.
- Recruitment and provision of incentives for middle level personnel for maintenance of WASH facilities.
- Strong collaboration between the training institutions and employers is critical to provide the requisite manpower for the health sector.
- Comprehensive training needs assessment in the sector in the short term to develop a capacity building action and investment plan. This will form a blueprint for systemic long-term staff development for WASH in the health sector.
- Implementing a gender mainstreaming policy and action plan for the WASH in health care facilities to promote female participation in the WASH sector.
- Advocacy for WASH Ambassadors and Champions within and outside HCF should be instituted.

- Incentives for institutions and staff who consistently promote and practice WASH according to the standards and guidelines should be duly acknowledged

3.4 Funding and Sustainability

To ensure the long-term sustainability of the WASH in HCF facilities, and to enable the country to achieve its targets as well as the SDG targets, there needs to be adequate funding to finance the infrastructure required in the existing facilities which do not meet the minimum standards. The repairs, operation and maintenance of all WASH in HCF must be carried out periodically as required. All new healthcare facilities to be constructed from 2020 should be designed to meet the minimum standards.

The expected funding sources include:

- Internally Generated Funds
- Local assemblies (Metropolitan, Municipal and District Assemblies)
- Development partners
- Non-governmental organisations and community-based organisations
- Private sector financing.

3.4.1 Internally Generated Funds

Internally Generated Funds are funds generated from the regular activities of the healthcare facility. This is expected to be used for the basic operation and maintenance activities and to provide the basic consumables.

Each healthcare facility will be required to dedicate a portion of the revenues it makes for maintaining WASH in the facility. The basic activities to be funded from IGF include paying for utilities, consumables and hygiene promotion activities.

3.4.2 Local Assemblies

Metropolitan, Municipal and District Assemblies (MMDAs) are responsible for the provision of social infrastructure in their areas of jurisdiction. They are also responsible for ensuring sustainability of infrastructure provided. The MMDAs will be required to support minor maintenance and other activities such as emptying of holding tanks of toilets. Where there are interruptions in water supply services the MMDAs will assist the HCFs with appropriate water supply services till water is restored.

3.4.3 Development Partners

Support for the development of various healthcare initiatives have been provided by development partners in the delivery of healthcare. All initiatives are to be

done in accordance with the standards, guidelines and priorities of the Ministry of Health and the Ghana Health Service. Funding for health education measures to reduce Hospital Associated Infections (HAIs) should be incorporated in all initiatives.

Where new infrastructure is funded and constructed, it should include the relevant minimum requirements for WASH in HCF.

3.4.4 NGOs/CBOs

There are several Non-Governmental Organisations (NGOs) and Community-Based Organisations (CBOs) undertaking activities in the healthcare space in Ghana. These activities are mostly aimed at providing primary healthcare to the vulnerable and support for hygiene education and promotion. Support is sometimes provided to health centres and CHPS compounds.

The support provided must ensure that the relevant minimum standards for WASH in HCF are maintained.

3.4.5 Private Sector Financing

Private entities have been involved in the delivery of healthcare facilities in the country over the years. The involvement of the private sector shall be encouraged and shall be done in accordance with all relevant national policies and guidelines including WASH/IPC in healthcare facilities.

The private sector may also support existing facilities with equipment and resources to help the implementation in WASH/IPC agenda.

3.4.6 Sustainability of WASH in Healthcare Facilities

A sustainable framework for WASH/IPC in HCF requires strengthening five key areas, namely financial, institutional/governance, environmental, technological and social.

Financial

A sustainable financing model depends largely on domestic funding for the continuous delivery of WASH services in healthcare facilities. Domestic funds constitute about 89% of healthcare financing in Ghana (NHA, 2016). However, about 90% of WASH services is donor funded. There is the need to shift from reliance on donor funding and mobilise more domestic resources (e.g. earmarking a percentage of IGF for WASH, private sector financing, public/private partnerships, portion of NHIA levy, specialised service fees etc.) to finance WASH services in healthcare facilities.

Institutional/Governance Systems

Sustainable institutional governance requires clarifying the roles and responsibilities of the various stakeholders; creating regulations, policies and functional institutions to meet demand. HeFRA and the Quality Management Unit of MOH have key roles in ensuring healthcare facilities adhere to WASH service standards.

In the context of data collection and monitoring, Ministry of Health and Ghana Health Services existing policies and tools such as DHIMS and NHA provide adequate framework for tracking WASH services and expenditure.

Technological

Technical sustainability means local partners must be able to maintain, repair and replace hardware for WASH services. This requires having the resources to maintain all categories of WASH in HCF.

Social

Socio cultural elements such as attitude towards hygiene and cleanliness, gender issues (privacy & menstrual hygiene management), attitudes to waste management, attitudes towards sanitation etc. need to be addressed to ensure sustainability. In the context of data tracking, attitudes towards record keeping and data management need to be addressed.

Environmental

Ensuring that WASH infrastructure do not have any adverse effects on the environment and livelihoods is critical. It is therefore important to create systems that ensure that all categories of waste and wastewater are properly disposed of in an environmentally acceptable manner in accordance with the laws of the Environmental Protection Agency. It is also necessary to consider climate change and its impact on water service delivery.

3.4.7 Tracking of WASH in Healthcare Facilities Expenditure

Tracking expenditure for WASH in healthcare facilities will be integrated into the Monitoring and Evaluation (M&E) system of the Ministry of Health, through the National Heath Account Framework. Key sections to be integrated into the data collection tool will include expenditure on water, sanitation, hygiene and healthcare waste management. In most cases, these data are already collected but integrated in other cost centres in the accounting system known as the Integrated Financial Management Information System. Specific line items will need to be created in the accounting systems to separate key items from existing budget lines.

Healthcare facility managers will be trained in reporting expenditure for WASH in addition to the financial reporting which is already done. The training will be focused on helping them to disaggregate WASH expenditure.

4 ASSUMPTIONS AND METHODOLOGY FOR COSTING

4.1 Key Principles

The key principles used in the costing of the national HCF strategy are as follows:

- **Types of Healthcare Facilities:** The costing framework is for all categories of healthcare facilities as defined by the Ministry of Health from CHPS compounds to Teaching Hospitals. This includes both public and private facilities. Health Training Institutions have also been included since the appropriate WASH in HCF is critical for training.
- **Investment Period:** The strategy is in line with the SDGs and the costing strategy is for a 10-year period from 2020 to 2030. Any delay or lapses should be identified prior to the completion of the 10-year investment period and resolved in the final year to ensure the target for 2030 is achieved.
- **Funding Sources:** It is expected that government will be the key financier for WASH in HCF. The national strategy requires all new healthcare facilities to have WASH amenities that meet the minimum criteria. The Metropolitan, Municipal and District Assemblies (MMDAs), NGOs and Development Partners investing in WASH will be required to follow the national guidelines and provide adequate WASH amenities. All stakeholders must work in line with government priorities and not their own agenda. Routine operation and maintenance of WASH amenities will be from Internally Generated Funds (IGF) of the healthcare facility. Major repairs and rehabilitation which the facility cannot afford will be supported by the MMDA and the GHS as the case may be. MMDAs are responsible for the provision of social infrastructure within their jurisdiction and should formally include the implementation and maintenance of WASH in HCF in their annual workplans.
- **Aggregation of Costs:** The cost estimates have been aggregated by district and region. This is for administrative purposes and changes are expected since there are regular demarcations for new districts and potentially new regions as well.

4.2 Public Healthcare Facilities and Training Institutions

The Ministry of Health recognizes different types of health facilities which help with the provision of health services in the country. Other services like the Ghana Ambulance Service and the outreach programmes of the Ghana Health Service and CHPS zones must be targeted in hygiene promotion activities for an effective coverage of WASH for healthcare provision. The details of public healthcare facilities and training institutions as reported by the Ghana Health Service for

2017 are as follows:

CHPS	Clinic	District Hospital	Health Centre	District Hospital	Midwife/ Maternity	Mines	Poly-clinic	Training Institutions
5,421	998	140	1,004	357	346	11	38	86

Costing for WASH in HCF will be based on the above.

4.3 Costing Methodology

The methodology adopted for costing is the Life Cycle Cost Approach (LCCA). This method ensures that all relevant costs are included in the model. The LCCA considers all costs including all capital/investment costs, replacement/ rehabilitation costs and recurrent expenditure (for operation and maintenance and other expenses).

4.3.1 Capital/Investment Costs

The costs considered under capital/investment costs include the following:

- Construction, installation, drilling or purchase of new WASH facilities including structures, pumps, pipes, toilets, urinals, basins and other hand washing facilities, bins etc.
- Demolition, disposal and replacement of facilities that are beyond repair and/or beyond their useful life.
- Major repairs and rehabilitation.

4.3.2 Recurrent/Operation and Maintenance Costs

The cost considered under recurrent, operation and maintenance to ensure continuous function of WASH facilities include the following:

- Paying of water, electricity and refuse collection bills as may be applicable,
- Emptying of sludge/septage from septic tanks, latrines and other sludge holding chambers per a facility,
- Purchase of consumables such as toilet rolls, soap, pad etc.
- Purchase of cleaning materials such mops, brushes, buckets, detergents etc.
- Hiring of cleaners or janitors or health care waste staff.
- Hiring of technical support services including plumbers, carpenters, masons, electricians etc. for minor repairs.
- Costs of hygiene promotion for staff, patients, family members etc. who use the facility as workers, patients or caregivers.

4.4 Inputs for Different Costing Scenarios

The key WASH Services that are required for each healthcare facility include the following:

- Water Supply
- Handwashing Facilities
- Toilet Facilities and Treatment/Disposal systems
- Disposal of Solid Waste and Healthcare Waste

To obtain a detailed analysis of the WASH services in Healthcare Facilities and to ensure that the facilities are operated and managed in a sustainable manner to reduce hospital transmitted infections, the following must also be considered:

- Hygiene Education and Behaviour Change
- Operation and Maintenance of WASH Facilities
- Proper, quick and safe disposal of grey water through an appropriate drainage system
- Maintenance of structures and facilities related to WASH in HCF
- Maintenance of a clean environment around the healthcare facility.

There is the need to combine the facilities and the behaviour change together with an extensive operation and maintenance system to ensure the full health benefits are derived.

4.5 Costing Options

There are three cost options considered for costing. These are:

- Category C: Teaching Hospitals and Regional Hospitals. These hospitals are generally very big and have several departments and units. Most of the departments must be assessed separately as they are bigger than the average hospital in the country.
- Category B: This category has a large number of facilities including district hospitals, private hospitals and clinics, training institutions and other categories of healthcare facilities.
- Category A: Health Centres, CHPS compounds, small Clinics and Maternity homes.

Variations are however provided where a particular facility will prefer a different service level for peculiar reasons.

The tables below provide summary costs for the different options for water supply, sanitation, hygiene and environmental sanitation which will be adopted for the various models. For a particular facility, the relevant costs which are applicable will be selected for each facility. The costs were based on prevailing rates as of December 2018.

Category A facilities are expected to mostly be rehabilitation, repairs and in some cases some additions to the existing facilities.

4.5.1 Water Supply Costing

No.	Item	Lifespan (years)	Unit Cost (GHS)
1	Water Supply		
1.1	Drilling & mechanisation of borehole with handpump	5	25,000.00
1.2	Drilling of borehole, mechanisation and installation with solar pump, solar panel & accessories, overhead pump and plumbing	10	140,000.00
1.3	Drilling of borehole, mechanisation and installation of electromechanical pump & accessories, overhead pump and plumbing	10	110,000.00
1.4	Provision of a hand pump only & installation	5	8,500.00
1.5	Provision of plumbing works	20	7,000.00
1.6	Pipe connection less than 1km	20	2,500.00
1.7	Pipe connection between than 1-5km	20	6,000.00
1.8	Storage tank (10,000 litres) and 3m stand	20	22,000.00
1.9	Storage tank (5,000 litres) and 2.5m stand	20	17,500.00

4.5.2 Toilets and Urinals

No.	Item	Lifespan (years)	Unit Cost (GHS)
2	Toilets and Urinals		
2.1	Construction of 2-unit water closet	20	18,000.00
2.2	Construction of 2-unit KVIP	15	16,000.00
2.3	Construction of 2-unit toilet with biological treatment	15	16,000.00
2.4	Construction of 10-unit water closet	20	110,000.00
2.5	Construction of 10-unit KVIP	15	80,000.00
2.6	Construction of 10-unit toilet with biological treatment	15	90,000.00
2.7	Construction of urinal for Health Centre/CHPS compound	15	7,500.00
2.8	Construction of urinal for bigger healthcare facilities	15	12,000.00

4.5.3 Handwashing

No.	Item	Lifespan (years)	Unit Cost (GHS)
3	Handwashing		
3.1	Construction of a basin/sink and plumbing works (1-2No.)	20	2,500.00
3.2	Construction of a basin/sink and plumbing works (3-5No.)	20	4,000.00
3.3	Provision of Veronica buckets with stand (Type 1)	2	800.00
3.4	Provision of Veronica buckets with stand (Type 2)	2	600.00

4.5.4 Environmental Sanitation

No.	Item	Lifespan (years)	Unit Cost (GHS)
4	Environmental Sanitation		
4.1	Provision of refuse bins 240litre	5	400.00
4.2	Provision of refuse bins 120litre	5	300.00
4.3	Construction of drainage works (0.5 to 1km)	20	7,500.00
4.4	Construction of drainage works (1km to 2.5km)	20	12,500.00
4.5	Basic Incinerator	20	10,000-100,000

4.5.5 Operation and Maintenance and Recurrent Costs

No.	Item	Period	Cat. B - Unit Cost (GHS)	Cat. C - Unit Cost (GHS)
5	O&M and Recurrent Costs			
5.1	Refuse disposal	Monthly	100	
5.2	Utilities (water & electricity)	Monthly	300-1,000	100-500
5.3	Printing of Hygiene Promotion Materials	Periodic	2,500-10,000	2,000
5.4	Hygiene Promotion	Quarterly	1,500-5,000	500-2,500
5.5	Cost of cleaning/janitorial services	Monthly	1,000-5,000	500-1,000
5.6	Weeding and general environmental cleanliness	Monthly	1,000-3,000	500-1,500
5.7	Basic O&M of WASH facilities	Bi-annual	3,000-8,000	2,000-5,000
5.8	Basic repairs	Annual	5,000-20,000	3,000-7,500
5.9	Other miscellaneous costs	Annual	5,000-30,000	2,000-10,000

5 MONITORING AND EVALUATION

The Ministry of Health has in place a monitoring and evaluation system which is aimed at ensuring prudent management and accountability practices within the health sector. The main goal of the Health Sector M&E framework is to have a coordinated and effective M&E mechanism that will support evidence-based decision-making and accountability in the health sector (MOH, 2016).

The monitoring and evaluation of the implementation of this National Strategy for WASH/IPC in all health facilities shall be done in line with the Health Sector Monitoring and Evaluation Framework. WASH/IPC specific guidelines, list of indicators, targets, reporting formats and requirements as contained in this document will be appended to the relevant annexes of the Health Sector M&E Framework. All health facilities will report on WASH/IPC indicators routinely (quarterly or bi-annually) into the national reporting system (DHIMS2) to access progress against agreed targets. Such reports must be validated especially at the facility and district levels prior to reporting into DHIMS2. The implementation of WASH/IPC activities in health facilities in the country will be monitored at three levels.

Environmental Health Officers assigned by the assemblies where each HCF is located will assist in ensuring that the relevant standards as prescribed in the assembly bye-laws on environmental sanitation are met.

Each facility will conduct a more detailed assessment based on agreed indicators and requirements as contained in this strategy, and in line with the general principles of the Water and Sanitation for Health Facility Improvement (WASH FIT) developed by the World Health Organisation.

The WASH FIT frameworks and tasks are described in the table below.

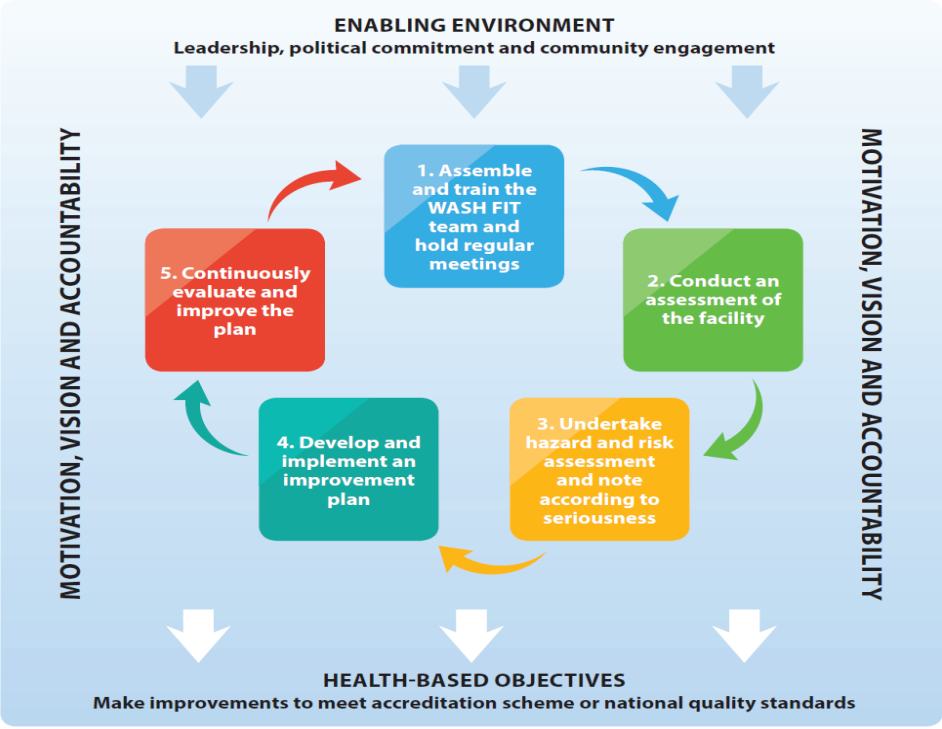

Figure 1: WASH FIT Framework and Tasks for Healthcare Facilities

For the purposes of ensuring adherence, enforcement and strict implementation of WASH/IPC in health facilities, regulatory agencies (especially Health Facility Regulatory Agency and health professional regulatory agencies) of the Ministry of Health will include the WASH/IPC standards set in this strategy in their regulatory standards and enforce implementation in the health facilities. The relevant regulatory agencies, as part of their reporting requirements to the Ministry of Health will include the extent to which WASH/IPC standards are implemented by the health facilities.

All healthcare facilities shall be required to meet the relevant regulatory requirements of other relevant national institutions. These shall include the National Building Code, the Building Regulations of the Local Government Authority where the facility is located, the Ghana Fire Service and the Environmental Protection Agency.

The monitoring and evaluation systems in place will ensure that all healthcare facilities are making the relevant improvements and sustaining quality WASH infrastructure services. The immediate impacts of an improved WASH in HCF M&E system include:

- Improved infection prevention and control,
- More efficient use of resources and lower healthcare costs, and
- Improved staff morale and performance.

A summary of the minimum standards for WASH to be monitored are as follows:

WASH	MINIMUM STANDARDS
Water Supply	• Water must be available on the premises of the Healthcare Facility and in **sufficient quantities** and must meet the **water quality standards** of the Ghana Standards Authority (GSA). • The Healthcare Facility must have a water storage capacity to meet at least two-day requirement of the facility.
Sanitation	• Improved toilets must be located on the **premises** of the healthcare facility in **adequate numbers** to meet the needs of the population and staff who use the facility and must be maintained so they are **clean and user friendly**. • Separate toilets should be provided for **staff and patients**. **Separate** toilets should be provided for **male and female** patients. At least one toilet must meet the need of **persons living with disabilities** and one female toilet must provide means for **menstrual hygiene management**.
Hygiene	• Water points, treatment areas, waiting rooms and toilets (maximum 5m away) should have soap or alcohol-based hand rubs for patients and staff. • Hygiene promotion shall be carried out regularly and hygiene promotion materials shall be clearly displayed. • Where water storage facilities are provided, the containers shall be kept clean and hygienic at all times. Drinking water containers shall be covered and fitted with taps.
Other	• Provision shall be made for proper and hygienic disposal of different categories of waste including non-infectious (general) waste, infectious waste and sharps. • All areas in a healthcare facility must be cleaned and maintained in a hygienic and environmentally friendly manner including proper maintenance of lawns, trees, shrubs and hedges etc. and appropriate disposal of grey water.

5.1 Indicators and Reporting Requirement for WASH/IPC in Health Facilities

The following sets of indicators and reporting requirements have been developed by the MoH for measuring improvements in healthcare facilities.

No.	Specific Area	Indicator	Measurement	Frequency
B11	Environment (Amenities)	Cleanliness of environment	Number of clients who say the facility environment is clean/ Total number interviewed	Biannual
B12	Client Satisfaction	% of clients satisfied with service provision	Number of clients satisfied with identified elements of service delivery/ Total number interviewed	Biannual

These indicators have been expanded to capture other elements for WASH in HCF as follows:

No.	Specific Area	Indicator	Measurement	Frequency
B11	Environment (Amenities)	Cleanliness of environment	Number of clients who say the facility environment is clean/ Total number interviewed	Biannual
B11a	Environment (Water)	- Availability in HCF - Quality - Quantity	- Water piped onto premises or borehole or well on premises - Meets GSA standards - Meets vol/patient standard & at all required locations	Biannual

No.	Specific Area	Indicator	Measurement	Frequency
B11b	Environment (Sanitation)	- Number available in HCF - Separate toilets for staff and patients - Separate toilets for male & female patients - At least one toilet for PWD & MHM	- Meets national standards - Yes/No - Yes/No - Yes/No	Biannual
B11c	Environment (Hygiene)	- Hand washing facility at all points of care - Hand hygiene material posted - Storage with cover and tap	- Yes/No - Yes/No - Yes/No	Biannual
B11d	Environment (HCWM)	- Segregation of waste sharps/ domestic/Infectious - Disposal system for liquid waste - Disposal system for solid waste	- Yes/No - Yes/No - Yes/No	Biannual
B12	Client Satisfaction	% of clients satisfied with service provision	Number of clients satisfied with identified **elements of service** delivery/ Total number interviewed	Biannual

No.	Specific Area	Indicator	Measurement	Frequency
B12a		**Elements of service:** - Surrounding weeded - Surrounding swept - Corridors clean - No stagnant water/good drainage	 - Yes/No - Yes/No - Yes/No - Yes/No	Biannual

5.1.1 Indicators for Water Supply

No	Indicator	Meets Target	Partially meets target	Does not meet target	Comments
1	Water Supply				
1.1	Water available in HCF	Piped in premise	Water in yard	No improved	
1.2	Water Quality				
1.3	Water Quantity				
1.4	Drinking station available in wards				
1.5	Risk management system in place (Water safety plan)				
1.6	Two-day water storage capacity available				

5.1.2 Indicators for Sanitation

No	Indicator	Meets Target	Partial-ly meets target	Does not meet tar-get	Comments
2	Sanitation				
2.1	Toilets available in HCF				
2.2	Separate toilets for staff and patients				
2.3	Separate toilets for male and female patients				
2.4	Toilets for PWDs available				
2.5	Toilets/changing room for MHM available				
2.6	Toilets are clean and hygienic				
2.7	Adequate disposal system in place				

5.1.3 Hygiene and Handwashing

No	Indicator	Meets Target	Partial-ly meets target	Does not meet tar-get	Comments
3	Hygiene & Handwashing				
3.1	Hand washing stations available at all points of care				
3.2	Hygiene promotion materials available and adequate in all key locations				
3.3	Water storage buckets/ tanks are clean, have a cover and a tap				
3.4	Handwashing stations available for patients				
3.5	Hygiene promotion activities carried out and documented				

5.1.4 Environmental Sanitation and O&M

No	Indicator	Meets Target	Partial-ly meets target	Does not meet tar-get	Comments
4	Environmental Sanitation				
4.1	Waste segregation takes place				
4.2	Colour coded bins provided				
4.3	Solid waste transport/ disposal adequate				
4.4	Surroundings swept Surroundings weeded				
4.5	Grey water disposed of				
4.6	Floors and corridors are clean				
4.7	Cleaning material available				
4.8	Cleaning records are kept				
4.9	Structural integrity of buildings				

6 IMPLEMENTATION ARRANGEMENTS

The implementation of the national strategy will be carried out in phases. The first phase which involves data collection and sensitization will be for a period of eighteen (18) months and will involve the following:

- Training of relevant personnel at national, regional, district and healthcare facility level on the importance of WASH in HCF and the data requirements.
- Integration of WASH in HCF into the National Health Accounts.
- Sensitisation of stakeholders on WASH in HCF ensuring all stakeholders have a clear understanding of the minimum standards for WASH in HCF and the national strategy.
- Each HCF will designate an officer(s) who will be responsible for all WASH in HCF activities. These will undergo a Trainer of Trainers exercise to enable them train and sensitise all personnel in the healthcare facilities.
- Data collection on coverage and costs for WASH in HCF.

6.1 Planning and Implementation

The second phase will overlap with the final six months of the first phase and will be for a period of 10 years from 2020 to 2030. The planning phase will cover the first year and overlap with the implementation phase as some key implementation activities including hygiene promotion and handwashing can start concurrently. The key activities to be undertaken in the planning phase will include the following:

- Ensuring the minimum standards are integrated into all WASH interventions by all stakeholders.
- Design and construction of all new facilities will incorporate minimum standards.
- Designated personnel in each HCF will be required to undertake periodic training for co-workers as well as sensitization of patients and their carers on the relevant issues relating to health and hygiene promotion.
- Each facility will be required to include an integrated hygiene promotion as well as operation and maintenance of WASH in HCF into the regular activities undertaken in the facility.
- WASH in HCF will be integrated into all District Medium Term Plans.

The key activities in the implementation phase will include the following:

- Hygiene education and promotion in all HCF.
- Provision of handwashing stations in all HCF.

- Procurement of goods, works and services.
- Rehabilitation of old sanitation facilities.
- Connection of healthcare facilities to water supply systems in their communities.
- Drilling and mechanization of boreholes.
- Construction of new storage tanks, hand washing stations with plumbing works.
- Construction of toilet facilities and urinals with changing rooms for women.

Operation, maintenance and monitoring of facilities will include the following:

- Operation and maintenance activities for all WASH in HCF by administrative staff and the personnel designated.
- Monitoring of HCF should be included in the schedule of the district directorates of health services as they visit facilities.

6.2 Mopping up and Meeting the SDG Targets

The mopping up phase will be one year from 2029 to 2030. The Ministry of Health through regular monitoring will have data on healthcare facilities which do not have adequate WASH facilities. Efforts will be put in to obtain funding to mop up all healthcare facilities which have outstanding WASH needs to ensure that the country meets the SDG targets for WASH in HCF by the close of 2030.

A comprehensive evaluation of all activities will be carried out to ensure that the targets set out have been achieved.

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ANNEX 1: MINIMUM REQUIREMENTS FOR WASH IN HCF

Minimum Requirements for Water Supply

The Minimum recommended standards for water supply for different types of health facilities are as follows:

Table 1: Minimum Recommended Standards for Water Supply in Healthcare Facilities

TYPE OF HEALTH FACILITY	ACCESS	QUANTITY	QUALITY
Hospitals	Internal plumbing (municipal supplies or mechanized borehole) Provision of storage tanks to provide minimum three-day storage where there is intermittent flow	75 litres/person/ day for in-patients 100 litres /per operation or childbirth 10 litres/person /day for out-patients 20 litres/person /day for staff	Ghana Standards Authority (GSA) standards for Water Quality
Polyclinics	Indoor plumbing (municipal supplies or mechanized borehole) Provision of storage tanks to provide minimum two-day storage where there is intermittent flow	60 litres/person /day for in-patients 100 litres/per operation or childbirth 10 litres/person /day for out-patients 10 litres/person /day for staff	Ghana Standards Authority (GSA) standards for Water Quality
Clinics	Indoor plumbing (municipal supplies or mechanized borehole) Provision of storage tanks to provide minimum two day storage where there is intermittent flow	50 litres/person /day for in-patients 100 litres/per operation or childbirth 5 litres/person /day for out-patients 10 litres/person /day for staff	Ghana Standards Authority (GSA) standards for Water Quality

TYPE OF HEALTH FACILITY	ACCESS	QUANTITY	QUALITY
Health Centres	Yard tap or borehole/ hand dug well with hand pump.	50 litres/person /day for detained patients 5 litres/person /day for out-patients 10 litres/person /day for staff	Ghana Standards Authority (GSA) standards for Water Quality
CHPS Compounds	Yard tap or borehole/ hand dug well with hand pump.	5 litres/person /day for out-patients 10 litres/person /day for staff	Ghana Standards Authority (GSA) standards for Water Quality

Healthcare facilities shall have rainwater harvesting systems incorporated in roof designs for all new facilities. For existing facilities, the feasibility of incorporating rainwater harvesting shall be assessed.

Minimum Requirement for Sanitation

The Minimum recommended standards for toilets in different types of health facilities are as follows:

Table 2: Minimum Recommended Standards for Sanitation in Healthcare Facilities

TYPE OF HEALTH FACILITY	ACCESS	QUANTITY	QUALITY
Hospitals	Toilet should be available in all wards and treatment areas for patients, staff and carers.	1 toilet for 20 in-patients 4 toilets for out-patients setting 1 toilet for 10 female staff 1 toilet per 15 male staff	Cleaning and maintenance regime ensure toilets are always clean

TYPE OF HEALTH FACILITY	ACCESS	QUANTITY	QUALITY
Polyclinics	Toilet should be available in all wards and treatment areas for patients, staff and carers.	1 toilet for 20 in-patients 4 toilets for out-patients setting 1 toilet for 10 female staff 1 toilet for 15 male staff	Cleaning and maintenance regime ensure toilets are always clean
Clinics	Toilet should be available on site for patients, staff and carers.	1 toilet for 20 in-patients 4 toilets for out-patients setting 1 toilet for 10 female staff 1 toilet for 15 male staff	Cleaning and maintenance regime ensure toilets are always clean
Health Centres	Toilet should be available on site for patients, staff and carers.	4 toilets per out-patients setting 1 toilet for 10 female staff 1 toilet for 15 male staff	Ensure storage facilities are well cleaned and fetching vessels are kept clean
CHPS Compounds	On-site toilets. Maximum 50m outside.	1 toilet each for male and female staff 1 toilet female patients and 1 toilet for male patients	Ensure storage facilities are well cleaned and fetching vessels are kept clean

Minimum Requirements for Handwashing Facilities/Hygiene

The following shall be applicable in all healthcare facilities:

- Hand washing facilities shall be provided in all treatment areas, delivery rooms, waiting areas and near toilets.
- All hand washing stations shall have soap or alcohol-based hand rubs.
- All water storage facilities shall be kept clean and hygienic at all times.

The following shall be provided for in-patient facilities:

- 1 shower per 25 users
- 2 hand washing facilities per 25 beds

ANNEX 2: COST CENTRES

LOW COST OPTION		MID RANGE OPTION		HIGH COST OPTION	
Category B	Category C	Category B	Category C	Category B	Category C
Water					
Storage tank	Storage Tank	Storage Tank	Storage Tank	Elevated Tank	Storage Tank
Mechanised Borehole/ Piped con.	Borehole/ Well with Hand Pump	Mechanised Borehole/ Piped con.	Borehole/ Well with Hand Pump	Mechanised Borehole/ Piped con.	Mechanised Borehole/ Piped con.
Toilets					
WC/bio treatment (male & female)	KVIP/bio treatment (male & female)	WC/bio treatment (male & female)	KVIP/bio treatment (male & female)	WC	WC/bio treatment
urinals (male & female), disability access, MHM	urinals (male & female), disability access, MHM	urinals (male & female), disability access, MHM	urinals (male & female), disability access, MHM	urinals (male & female), disability access, MHM	urinals (male & female), disability access, MHM
Handwashing					
Veronica buckets	Tippy Tap/ Veronica buckets	Veronica buckets/ internal plumbing	Veronica buckets	Internal plumbing	Veronica buckets/ internal plumbing
alcohol hand rub	alcohol hand rub	alcohol hand rub	alcohol hand rub	alcohol hand rub	alcohol hand rub

LOW COST OPTION		MID RANGE OPTION		HIGH COST OPTION	
Category B	Category C	Category B	Category C	Category B	Category C
Environmental Sanitation					
Bins	Bins	Bins	Bins	Bins	Bins
Drainage	Drainage/ soakaway	Drainage	Drainage/ soakaway	Drainage	Drainage
Operation & Maintenance					
General O&M	General O&M	General O&M	General O&M	General O&M	General O&M
Minor repairs	Minor repairs	Minor repairs	Minor repairs	Minor repairs	Minor repairs
Major repairs	Major repairs	Major repairs	Major repairs	Major repairs	Major repairs

Annex 3.1: Construction, Provision and Rehabilitation of WASH Facilities

REGION	Construction, Provision and Rehabilitation of WASH Facilities					
	Final Disposable of Solid Waste	Sanitation Facility	Hygiene Services/ Handwashing	Waste Management System	Water Supply	Sub-Total
ASHANTI	5,781,864.84	17,450,454.84	886,564.73	1,080,849.29	5,908,444.78	**31,108,178.48**
AHAFO	917,427.35	2,768,920.59	140,674.12	171,501.88	937,512.21	**4,936,036.15**
BONO	1,948,157.31	5,879,803.85	298,721.54	364,184.31	1,990,807.50	**10,481,674.50**
BONO EAST	1,346,865.33	4,065,022.83	206,522.17	251,780.09	1,376,351.68	**7,246,542.10**
CENTRAL	1,135,964.16	3,428,494.42	174,183.55	212,354.68	1,160,833.35	**6,111,830.16**
EASTERN	3,170,948.23	9,570,353.23	486,218.71	592,770.19	3,240,368.47	**17,060,658.82**
GREATER ACCRA	2,290,874.13	6,914,169.84	351,272.17	428,251.05	2,341,027.28	**12,325,594.46**
NORTH EAST	1,166,693.08	3,521,238.46	178,895.38	218,099.08	1,192,235.00	**6,277,161.00**
NORTHERN	805,794.47	2,431,997.37	123,556.84	150,633.47	823,435.39	**4,335,417.55**
SAVANNAH	657,862.07	1,985,517.24	100,873.56	122,979.31	672,264.37	**3,539,496.55**
OTI	2,356,694.12	7,112,823.53	361,364.71	440,555.29	2,408,288.24	**12,679,725.88**
UPPER EAST	2,900,502.71	8,754,111.86	444,749.83	542,213.69	2,964,002.20	**15,605,580.31**
UPPER WEST	1,027,793.66	3,102,021.13	157,597.18	192,133.52	1,050,294.72	**5,529,840.21**
VOLTA	1,611,317.57	4,863,175.68	247,072.07	301,216.22	1,646,593.47	**8,669,375.00**
WESTERN	1,224,739.46	3,696,430.36	187,795.95	228,950.14	1,251,552.17	**6,589,468.09**
WESTERN NORTH	1,932,820.33	5,833,514.75	296,369.84	361,317.25	1,975,134.75	**10,399,156.92**
TOTAL	30,276,318.81	91,378,049.96	4,642,432.36	5,659,789.46	30,939,145.58	**162,895,736.18**

ANNEX 3: Summary of Costs – WASH in HCF

Costing has been done using the Inputs and Costing Options provided in Chapter 4. The data provided for the estimations was for the Healthcare Facilities where data was obtained. The data was extrapolated for each category of healthcare facilities as indicated in section 4.5. The costs estimates do not include costs for new facilities as data was not available for potential new facilities. Costs used are based on December 2018 figures.

Annex 3.2: Annual Operation and Maintenance Costs

REGION	Annual Operation and Maintenance Costs					
	Final Disposable of Solid Waste	Sanitation Facility	Hygiene Services/ Handwashing	Waste Manage-ment System	Water Supply	Sub-Total
ASHANTI	3,111,624.00	9,785,832.00	3,788,064.00	4,216,476.00	6,899,688.00	**27,801,684.00**
AHAFO	361,008.00	1,135,344.00	439,488.00	489,192.00	800,496.00	**3,225,528.00**
BONO	879,336.00	2,765,448.00	1,070,496.00	1,191,564.00	1,949,832.00	**7,856,676.00**
BONO EAST	717,048.00	2,255,064.00	872,928.00	971,652.00	1,589,976.00	**6,406,668.00**
CENTRAL	1,294,992.00	4,072,656.00	1,576,512.00	1,754,808.00	2,871,504.00	**11,570,472.00**
EASTERN	2,275,344.00	7,155,792.00	2,769,984.00	3,083,256.00	5,045,328.00	**20,329,704.00**
GREATER ACCRA	2,505,528.00	7,879,704.00	3,050,208.00	3,395,172.00	5,555,736.00	**22,386,348.00**
NORTH EAST	263,304.00	828,072.00	320,544.00	356,796.00	583,848.00	**2,352,564.00**
NORTHERN	885,960.00	2,786,280.00	1,078,560.00	1,200,540.00	1,964,520.00	**7,915,860.00**
SAVANNAH	331,200.00	1,041,600.00	403,200.00	448,800.00	734,400.00	**2,959,200.00**
OTI	463,680.00	1,458,240.00	564,480.00	628,320.00	1,028,160.00	**4,142,880.00**
UPPER EAST	990,288.00	3,114,384.00	1,205,568.00	1,341,912.00	2,195,856.00	**8,848,008.00**
UPPER WEST	844,560.00	2,656,080.00	1,028,160.00	1,144,440.00	1,872,720.00	**7,545,960.00**
VOLTA	1,035,000.00	3,255,000.00	1,260,000.00	1,402,500.00	2,295,000.00	**9,247,500.00**
WESTERN	1,190,664.00	3,744,552.00	1,449,504.00	1,613,436.00	2,640,168.00	**10,638,324.00**
WESTERN NORTH	682,272.00	2,145,696.00	830,592.00	924,528.00	1,512,864.00	**6,095,952.00**
TOTAL	17,831,808.00	56,079,744.00	21,708,288.00	24,163,392.00	39,540,096.00	**159,323,328.00**

ANNEX 4: KEY STAKEHOLDERS CONSULTED

No.	NAME	ORGANISATION
1	Nana Kwabena Adjei-Mensah	Chief Director
2	Dr. Emmanuel Ankrah Odame	Director, PPMED
3	Dr. Martha Gyansa-Lutterodt	MOH-Technical Coordination Directorate
4	Dr. Maureen Martey	MOH-RMU/B
5	Dr. Ernest K. Asiedu	MOH-QMU
6	Dr. Anthony Ofosu	GHS-Deputy Director General
7	Dr. K. Boateng Boakye	GHS
8	Dr. Mary Eyram Ashinyo	GHS – Quality Assurance
9	Suzzy Abaidoo	MSWR
10	Charles Adjei Acquah	GHS-PPME
11	Gloria Ntow-Kumi	GHS
12	Motoko Seko	MOH-PPME
13	Benjamin Nyakutsey	MOH-PCU
14	Dela Kemevor	MOH-Admin
15	Margaret A. Okine	MLGRD/PPBME
16	Dr. Peter Baffoe	UNICEF
17	Akosua Kwakye	WHO
18	Abena Nakawa	UNDP
19	Dr. C.O.K Amenuveve	GAQHI
20	Dr. Barnabas Yeboah	CPO-Nursing & Midwifery
21	Michael Bour	MOH
22	Fatima Mohammed	MOH-PPME
23	Kofi Adusei	MOH-PPME
24	Aminu Zuleiha Luqman	MOH-PCU
25	Abdul-Mumin Ibrahim	MOH-RMU/B
26	Lucas Annan	MOH-PCU
27	Olivia Kafui Dansu	MOH-PCU
28	Rahilu Haruna	MOH-RMU/M

No.	NAME	ORGANISATION
29	Alex Mofatt	MOH-PCU
30	Emmanuel Bolu	MOH-PPME
31	George Awuyah	MOH-PBU
32	Oswald Owusu-Akuoku	Ghana Coalition of NGOs In Health
33	Mark Atuahene	MOH-TCD
34	Thelma J. Jakalia	MOH-PPME
35	Mavis A. Botchway	MOH-QMU
36	Michael Affordale	SOH-Korle-Bu
37	Selina Dussey	MOH-QMU