EXECUTIVE SUMMARY REPORT OF NATIONAL ASSESSMENT OF WATER, SANITATION AND HYGIENE IN PUBLIC HEALTH CARE FACILITIES IN CAMBODIA 2024













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Executive summary

Introduction

Safe and quality water, sanitation, hygiene, health care waste management and environmental cleaning (WASH) in health care facilities (HCFs) is fundamental to preventing and controlling infection, tackling antimicrobial resistance and ensuring quality of care – a prerequisite for achieving universal health coverage and good health outcomes. However, access to basic WASH services in HCFs remains poor or absent in many low and middle-income countries. In Cambodia, an assessment of WASH in 117 public sector HCFs found that water supply was reasonably good but sanitation, hand hygiene, waste management, and environmental cleaning were relatively poor. Further improvement in WASH in HCFs in Cambodia requires reliable and updated data at national scale to compute national and global WASH indicators and to identify and prioritize areas for improvement. Therefore, a national assessment of WASH in public sector HCFs was conducted in late 2023 by the National Institute of Public Health with guidance from the Ministry of Health's Hospital Service Department and support from UNICEF and Plan International.



National assessment of water, sanitation and hygiene in public health care facilities in cambodia

Objectives

The general objective of the assessment was not only to provide data for monitoring of WASH at national and global level and produce useful information and evidence for the Ministry of Health and related health partners to continue to improve WASH in HCFs in Cambodia. The data is intended to provide a basis for estimating financial gaps to meet WASH targets of sustainable development goals by 2030.

More specifically, this study aimed to understand the situation of WASH in health centres and referral hospitals in Cambodia by computing the five WASH in HCF core indicators related to SDG6, two of which are national WASH indicators, and identifying gaps and constraints the HCFs were facing and to suggest potential solutions to bridge the gaps and address the constraints.





Background

The health system in Cambodia consists of a district-based public sector and a fast-growing private sector. The public sector is structured under operational health districts (OD) which may cover 100,000 – 200,000 people living in multiple administrative districts within a province/municipality. Each OD has a public referral hospital (RH) and some 10 – 20 health centres (HCs), each with a catchment area covering between 8,000 and 12,000 people. By 2022, there are 1,419 public sector HCFs, including 12 national hospitals, 20 level 3 RHs, 39 level 2 RHs, 60 level 1 RHs, and 1,288 HCs.

WASH in HCFs broadly refers to access to water, toilets/latrines, health care waste management, the cleanliness of the environment, availability of hand hygiene facilities, knowledge and practices of hand hygiene in all kinds of public and private sector HCFs and their surrounding environment and compound. WASH in HCFs also considers domains such as the functionality, operation, availability and quality of these services. Please see chapter 3.2 in the main report for further detail on the definitions of the five core WASH in HCF indicators.

Methodology

A facility-based cross-sectional survey of a national representative of 302 randomly selected public sector HCFs was conducted in late 2023. Data on HCF characteristics, staffing, electricity and water supply, sanitation, hand hygiene, health care waste management and environmental cleaning in the study HCFs were collected by 16 trained and experienced surveyors through staff interviews using a questionnaire (Annex 1) and direct observation during the facility walkthrough using checklists (Annex 2). The collected data were cleaned and analyzed by the principal investigator to computed WASH core indictors and other necessary variables. For each WASH core indicator, data were disaggregated: by HCs and RHs; service ladders (basic, limited and no service); urban and rural areas; and by areas of high and low risk to drought and floods. This study received approval from the National Ethics Committee for Health Research in Cambodia on 02 November 2023.



Results

Facility key characteristics

We assessed 302 HCFs, including 270 HCs and 32 RHs, as planned. Of them, 74% were located in rural area and 26% others in urban area. The risk of drought and riverine flood with risk score from 0 (very low risk) to 10 (very high risk) was assessed and found that 45% of the HCFs (45% of HCs and 50% of RHs) had high risk of drought, whereas 32% of them (30% of HCs and 47% of RHs) had high risk of riverine flood (with risk score 7 or above).



Staffing

On average, there were ten personnel, including four midwives and one cleaner per HC. All HCs had at least one midwife and 99% of them had at least secondary/bachelor midwife, but 85% of the HCs had only one cleaner and 13% others had no cleaner at all. The number of personnel at RHs greatly different depending on their level with an average of 53 for CPA1, 83 for CPA2 and 273 for CPA3. On average, there were three specialists, 21 medical doctors, 43 nurses, 23 midwives and nine cleaners per RH. On average, each HC served 32 clients per day each, whereas each RH had 122 clients per day.

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Electricity supply

All the assessed HCFs had electricity supply from at least one functional main source, mostly national/community grid, except two HCs with solar panel and one HC with generator, with 91% of the RHs having a backup source, mostly generator, but only 49% of the HCs, mostly solar panel. In general, 93% of the HCFs (93% of HCs and 94% of RHs) reported that the electricity supply was enough to meet the facility's basic needs.

Water supply



Overall, 96% of the HCFs (96% of HCs and 94% of RHs) had basic water service (water was available from an improved source located on premises) and 4% had limited and no water service. The main sources of water at all HCFs were an improved source, except seven HCs and two RHs still relied on surface water as their main source. All of the main water sources were located on premises and 99% (99% at HCs and 100% at RHs) were functional with water available at the time of assessment. While 38% of the assessed HCFs (37% of the HCs and 47% of the RHs) said that the available water sources provided enough water year-round for all purposes, including drinking, 60% others (61% of the HCs and 53% of the RHs) reported that the available sources provided enough water the whole year for only general purposes other than drinking.



Sanitation

Only 7% of the HCFs (5% of the HCs and 19% of the RHs) had basic sanitation service (improved and usable sanitation facilities, with at least one toilet dedicated for staff, one for sex-separated with menstrual hygiene facilities, and one accessible for users with limited mobility) while many others had limited sanitation service. Almost all (except one HC) had at least one improved and usable toilet on the HCF premises or in the block outpatient department of RHs, whereas 76% (74% of the HCs and 91% of RHs) had at least three. Half of the HCFs (47% of the HCs and 75% of the RHs) had at least one improved toilet which is dedicated for staff, and 31% of the HCFs (30% of the HCs and 38% of the RHs) had one improved toilet separated for use by women/girls with facilities for menstrual hygiene management and 22% of the HCFs (22 of the HCs and 28% of the RHs) had at least one improved toilet which is accessible for people with limited mobility. Over 12% of the assessed HCs and RHs, their sanitation containments were likely to have overflowed or discharged excreta directly to surface environment.



Hand hygiene

Overall, 82% of the HCFs (82% of the HCs and 84% of the RHs) had basic hand hygiene service (with functional hand hygiene facilities available at one or more points of care and within 5 meters of toilets). Of the assessed HCFs, 95% (95% of the HCs and 97% of the RHs) had functional hand hygiene facilities (functional handwashing station (sink) and/or ABHR station) in consultation room/outpatient department. In the delivery room/maternity department, 99% of the assessed HCFs (98% of the HCs and 100% of the RHs) had functional hand hygiene facilities. Hand hygiene facilities at or near toilets were mostly present with 83% of the HCFs (83% of HCs and 84% of RHs) having functional hand washing stations with soap and water at the time of assessment. Only 25% of the HCFs (23% of the HCs and 38% of the RHs) reported that all their clinical staff have been trained on five key moments and hand hygiene process at least once

Healthcare waste management



Overall, 54% of the assessed HCFs (55% of the HCs and 47% of the RHs) had basic health care waste management service, while others had limited and no service. 76% of the HCFs (76% of the HCs and 74% of the RHs) had their waste correctly segregated at consultation room/area and 78% of them (82% of the HCs and 75% of the RHs) had correct waste segregation at delivery room/area. Overall, sharps waste at 99% of the HCFs (99% of HCs and 100% of RHs) was treated/disposed of safely, while infectious (non-sharps) waste was treated/disposed of safely at 90% of the HCFs (90% of HCs and 91% of RHs), and placenta was treated/disposed of safely at 83% of the HCFs (82% of HCs and 94% of RHs).

Environmental cleaning



Only 2% of the assessed HCFs (0.4% of the HCs and 13% of the RHs) had basic environmental cleaning service (having protocols for cleaning and staff with cleaning responsibility having all received training on cleaning procedures), while many others had limited or no service. Only 9% of the HCFs (7% of the HCs and 31% of the RHs) reported that all staff responsible for cleaning had received training on environmental cleaning at least once. Very few HCFs (six HCs and one RH) could present their cleaning protocols which include a cleaning roster/schedule and step-by-step technical guidance.



The table below presents the basic WASH services, including water supply, sanitation, hand hygiene, health care waste management and environmental cleaning, in the assessed HCs and RHs in Cambodia in 2023.



Comparison of basic WASH services in five provinces in Cambodia between 2016 and 2023, as presented in the table below, shows a significant improvement, especially for hand hygiene and health care waste management.



Reported major WASH-related constraints/ challenges

Key informants at 69% of the assessed HCFs (70% of the HCs and 56% of the RHs) reported at least one major constraint/challenge in terms of WASH that their HCF was facing. The three most frequently reported WASH-related constraints were water supply; waste management and disposal; and lack of cleaners. Key informants in 35% of the assessed HCFs (35% of the HCs and 33% of the RHs) complained that their HCF had no clean water supply or the existing water supply was of poor quality. Moreover, 11 HCFs (including 10 HCs) reported insufficient water availability in the dry season and/or the well was flooded during rainy season. Seven HCs complained about lack of drinking water (or lack of money to buy the drinking water) for clients. Over 15% of the HCFs (16% of the HCs and 6% of the RHs) reported problems related to waste treatment/disposal, mainly due to the absence of appropriate incinerator or the existing incinerator was broken or located faraway or poor/irregular waste collection service. 13% of the assessed HCFs (13% of the HCs and 11% of the RHs) raised about lack of cleaners, as a result from having no/not enough budget to hire more cleaners with higher qualification while the allowed number of government-contracted cleaners is limited.



Discussion, conclusion and recommendations

This is a first national cross-sectional assessment of WASH in public sector HCFs in Cambodia. Although the study design and methodology ensured that quality assurance measures be applied throughout the assessment, this study has some potential limitations. These include possible seasonal biases due to this cross-sectional design of this study; that WASH indicators used focus on facilities and may not fully describe WASH services and practices; and challenges to aligning the study with both national and international definitions related to WASH indicators.



Despite these potential limitations, careful interpretation of the findings allows not only the generation of data for monitoring WASH at national and global level, but also useful information and evidence for the Ministry of Health and related health partners to further improve WASH in HCFs in Cambodia. The findings from this study could also be used as a basis for estimating financial gaps for achieving targets of sustainable development goals by 2030.

Despite considerable improvement being made since 2016, WASH in HCFs in Cambodia, especially sanitation, health care waste management and environmental cleaning service, requires further improvement to ensure safety and quality of care, thereby contributing to mitigating antimicrobial resistance and achieving quality universal health coverage and sustainable development goals.

The following are some considerations for future national policies and actions to further improve WASH in Cambodia:

- Update the current national IPC and WASH guidelines incorporating necessary WASH-related norms, standards and definitions, with more elaborated sections on environmental cleaning and monitoring and evaluation for Cambodia, and widely introduce them to HCFs and other relevant stakeholders, including appropriate considerations related to climate risks;
- Necessary clean climate resilient water supply systems should be put in place in HCFs that still rely on surface water or the existing main water supply is of poor quality, along with further construction and maintenance of back up sources such as rainwater collection in areas where there is no underground water to address the shortage of water in dry season;
- Further effort in construction and management is needed to have at least one improved toilet meeting the needs of people with reduced mobility, and one toilet dedicated for use by women and girls with facilities to manage menstrual hygiene. Sanitation and hygiene systems shall be developed considering local climate/environment risks;
- Adequate supplies of appropriate waste bins and needle boxes, coupled with education, monitoring and coaching are necessary to improve waste segregation at key points of care. Ensuring safe treatment/disposal of sharps and infectious waste requires immediate repairment or preplacement of the broken incinerators and not functional or nearly full placenta pits. Longer term plans could consider having health care wastes collected and treated by professional firms in each province or region;
- All HCFs should develop and introduce cleaning protocols with step-by-step techniques for specific tasks and a cleaning roster or schedule specifying responsibilities for cleaning tasks and frequency, coupled with training on environmental cleaning to all staff responsible for cleaning. In addition, the problem of lack of cleaners in some HCFs should be addressed with more efficient use of the existing cleaners coupled with opportunity to have more cleaners as government contracted staff or hired by the HCFs;
- Staff motivation and commitment needs to be strengthened to ensure best practices of basic WASH in HCFs, including setting up a mechanism to incentivize best climate resilient WASH practices in HCFs with routine evaluation of WASH services in HCFs that is linked to incentives such as WASH-related investment, awarding certificates of appreciation, and financial incentives; and,
- Further assessments of this kind should consider addressing the potential limitations, including assessment of WASH in private HCFs and measurement of WASH practices in further detail.