



# TECHNICAL FACT SHEET 6

## Environmental Cleaning

Environmental cleaning within health care facilities is important in order to achieve 'hygiene' (the 'h' in WASH) and is one part of ensuring a safe health care environment and in preventing healthcare-associated infections. Environmental cleaning is a part of infection prevention and control (IPC) standard precautions, which are the minimum practices that should be in place at all times in all health care settings. Cleaning and disinfection of both environmental surfaces and non-critical patient care equipment, when undertaken at the right times and in the correct way, significantly reduces microbial contamination and therefore reduces the risk of pathogen transmission to patients, health workers and others via the health care environment.

Effective environmental cleaning is dependent on a number of things, ranging from well-functioning infrastructure and services (e.g., adequate water supply) to ensuring best practices among staff responsible for cleaning (e.g., use of standardized techniques). Important enablers of effective environmental cleaning include the existence and application of cleaning protocols, schedules that outline the frequency of cleaning, availability of supplies to perform activities efficiently and safely (mops, brooms, cleaning detergents, storage facility, personal protective equipment – PPE and hand hygiene resources), staff availability and competency, occupational health and training of cleaners, budgeting, laundry facilities and selected aspects of food hygiene.

Staff responsible for environmental cleaning (e.g., cleaners, orderlies, nurses) and those who provide supervision and support to environmental cleaning activities should be considered as key members of the WASH FIT team. Additionally, environmental cleaning activities in health care settings may be outsourced to external companies, so it's important to also engage representatives from the company in the WASH FIT process, as applicable.

### Environmental cleaning considerations within the Water and Sanitation for Health Facility Improvement Tool (WASH FIT) cycle

Step	Activity	Additional considerations
<b>Preparation</b>	Where they exist, review existing national guidelines, standards, policies and activities related to environmental cleaning in health facilities, and WASH infrastructure and services. Select high-priority wards to focus the improvement cycle as needed, for larger facilities (e.g., hospital level).	Improving environmental cleaning as part of broader IPC efforts requires a multidisciplinary, multifaceted approach. WHO calls this the multimodal improvement strategy (MMIS) (see <b>Improvements and Related tools and selected further reading</b> at the end)
<b>Step 1: Form the team</b>	Ensure that the WASH FIT team includes members with expertise in cleaning (IPC staff or cleaning supervisors), quality improvement activities and methodologies, as well as facilities management. Engage a representative from external cleaning company to join the team, as appropriate.	Members of the team responsible for environmental cleaning in health care should review the WASH FIT environmental cleaning module before starting, as well as indicators from other domains that enable effective environmental cleaning (see indicators in Step 2 below)

**Step 2: Assess the facility**

A number of WASH FIT indicators can help facilities to assess and improve environmental cleaning. Most of these indicators are within the environmental cleaning module (**the full list is on page 65 of the Guide**); however, there are key indicators from other domains that also affect environmental cleaning, including:

**Water:**

- An improved water supply is piped into the facility or located on premises (primary care facilities) or the facility has piped water supplies on premises (secondary/tertiary hospitals) [W1a or 1b]
- Water is available during all operating times of the facility to facilitate daily environmental cleaning\* [W3a]
- Water is of sufficient quantity for environmental cleaning\* [W7]

**Sanitation:**

- A greywater drainage system is in place that diverts water away from the facility into a safe drainage or leach field area [S11]
- "[Where there is a greywater system] Greywater from sinks and laundry facilities is safely captured, has separate plumbing (e.g. no cross connections with drinking water or fecal waste) [S13]

**Health care waste:**

- Any environmental cleaning staff who handle or dispose of waste are vaccinated against hepatitis B (and have any other recommended vaccinations, according to national guidelines)\* [HCWM19]

**Hand hygiene:**

- Functioning hand hygiene stations are available in the waste disposal area and environmental services area\* (note that this is also covered in EC\_9 but is not explicit in the indicator) [H2]

**Energy and environment:**

- Sustainable procurement (using a life cycle approach) is used for the selection and purchase of cleaning chemicals (e.g., low toxicity disinfectants)\* [E12]

**Management and workforce:**

- An up-to-date diagram of the facility management structure, including cleaning staff, is clearly visible and legible [M4]
- All auxiliary staff, including waste handlers and those who clean, have a clear, written job description, which outlines WASH and IPC responsibilities [M5]
- All new auxiliary staff, including waste handlers and those who clean, receive appropriate WASH and IPC training, tailored and appropriate to their job function [M6]
- A protocol and effective system are in place for ongoing operation and maintenance of infrastructure and procurement of necessary supplies for environmental cleaning\* [M8]
- Budget is available to cover costs of cleaners and maintenance staff, IPC/WASH training, IPC/WASH consumables (e.g. soap, chlorine) and all activities listed in the procurement protocol. (note that this is also covered in EC\_8, but is not explicit in the indicator) [M9]

\*where indicated with an asterisk, wording of indicators has been slightly modified to make specific to assessing environmental cleaning

To undertake more detailed assessments and quality improvement on environmental cleaning, refer to the Environmental Cleaning Program Improvement Toolkit: A Practical Guide for Implementing the Best Practices for Environmental Cleaning in Healthcare Facilities in Resource-Limited Settings (see **Related tools and selected further reading** at the end)

Step	Activity	Additional considerations
<b>Step 3: Risk assessment</b>	A combination of the probability of contamination (e.g., blood and body fluids), patient vulnerability to infection (e.g., immunocompromised) and potential for exposure (e.g., contact between contaminated environment and hands of patients or healthcare workers) can be used to determine risk-levels for environmental cleaning by patient care area. <b>A risk-assessment tool for determining environmental cleaning method and frequency (i.e., SOPs, cleaning schedules) by patient care area is available and accompanies the training module.</b> This risk-assessment tool can be used to identify high-risk wards that could be the focus of improvement plans (Step 4).	Alternatively, risk assessment can also be used during Step 1: Preparation to decide on a particular ward(s) (e.g., wards designated as high-risk) to focus the WASH FIT improvement cycle
<b>Step 4: Develop and implement improvement plan</b>	Prioritize low cost, quick win activities to start with. Examples include developing policy/protocols, cleaning logs, conducting an inventory/assessment of cleaning supplies and equipment, developing a budget for supply and training needs, repurposing an area to serve as the environmental cleaning services area (area where solutions prepared and cleaning equipment reprocessed).	Explore where activities can be embedded as part of other existing health programmes
<b>Step 5: Review, adapt, improve</b>	Environmental cleaning is multi-faceted and requires incremental improvements using a multi-modal approach. It requires close collaboration between IPC and WASH personnel.	Best practices for environmental cleaning and assessments are also evolving as new evidence becomes available.

## Improvements

Improved environmental cleaning practices and processes are a distinct module within the WASH FIT package as expected outcomes of using WASH FIT. The indicators in this module span across several domains and can be categorized according to the MMIS. Addressing the steps and indicators within the environmental cleaning module will take time and may require consultation and use of external resources (see **Related tools and selected further reading** at the end). Some examples of potential improvements are listed below in the table.

Domain	Improvement
<b>Organizational structures</b>	<ul style="list-style-type: none"> <li>Develop a clear and detailed facility (or ward) cleaning policy or protocol which is clearly displayed, implemented and monitored.</li> <li>Determine the required number of cleaning staff or staff with cleaning responsibilities in the ward/facility every day/when cleaning is needed and ensure they have time dedicated to performing cleaning activities.</li> <li>Develop/implement policy and practices to improve the occupational safety of cleaners and health care waste technicians.</li> <li>Estimate the required annual budget for environmental cleaning supplies and equipment exists for the facility (or ward), as well as the budget for personnel, staff training, equipment for program monitoring, administrative costs, production and printing costs for checklists, logs and other job aids.</li> <li>Allocate a dedicated area for storage, preparation and care of cleaning supplies and equipment ("environmental cleaning services area"), ensure it is kept clean and well maintained, and is used according to its purpose.</li> </ul>
<b>Training and education</b>	<ul style="list-style-type: none"> <li>Train staff responsible for cleaning, using tested and validated training modalities.</li> </ul>
<b>Schedules and procedures</b>	<ul style="list-style-type: none"> <li>Ensure that toilets are cleaned at least once each day by developing a record of cleaning that is signed by the cleaners and displayed visibly.</li> </ul>
<b>Monitoring and feedback</b>	<ul style="list-style-type: none"> <li>Assign a staff member with responsibility for ensuring that the record of cleaning is available for patient care areas, general wards or whole facility and is signed by the relevant cleaner each day.</li> </ul>
<b>Infrastructure, supplies and product management</b>	<ul style="list-style-type: none"> <li>Procure appropriate and well-maintained materials for cleaning (i.e. detergent, mops, buckets, etc.) for cleaning in a range of different areas and surfaces.</li> <li>Ensure adequate PPE is available at all times and in sufficient quantities for all cleaning staff alongside hand hygiene resources.</li> </ul>

## Related tools and selected further reading

CDC and ICAN (2019) Best Practices for Environmental Cleaning in Healthcare Facilities in Resource-Limited Settings. Atlanta, GA: US Department of Health and Human Services, CDC; 2019. Available from: <https://www.cdc.gov/hai/prevent/resource-limited/index.html>

CDC and ICAN (2022) Environmental Cleaning Program Improvement Toolkit: A Practical Guide for Implementing the Best Practices for Environmental Cleaning in Healthcare Facilities in Resource-Limited Settings. Available from: <https://www.cdc.gov/hai/prevent/resource-limited/index.html>

WHO (2022) Aide Mémoire: Standard precautions for the prevention and control of infections. Available from: <https://www.who.int/publications/i/item/WHO-UHL-IHS-IPC-2022.1>

WHO (2021) Aide-memoire: environmental cleaning, waste and linen management. WHO EURO. Available from: <https://apps.who.int/iris/bitstream/handle/10665/341416/9789289055475-eng.pdf>

LSHTM (2019). TEACH CLEAN. Available from: <https://www.lshtm.ac.uk/research/centres/march-centre/soapbox-collaborative/teach-clean>

WHO (2019) Implementation manual to prevent and control the spread of carbapenem-resistant organisms at the national and health care facility level WHO 2019: <https://apps.who.int/iris/bitstream/handle/10665/312226/WHO-UHC-SDS-2019.6-eng.pdf>

WHO/UNICEF (2020) Water, sanitation, hygiene, and waste management for SARS-CoV-2, the virus that causes COVID-19. <https://www.who.int/publications-detail-redirect/WHO-2019-nCoV-IPC-WASH-2020.4>

WHO (2008) Essential environmental health standards in health care. <https://www.who.int/publications/i/item/9789241547239>

WHO (2021) Multimodal Improvement Strategy Summary [https://cdn.who.int/media/docs/default-source/integrated-health-services-\(ihs\)/hand-hygiene/tools/ipc-cc-mis.pdf?sfvrsn=425b25d\\_6&download=true](https://cdn.who.int/media/docs/default-source/integrated-health-services-(ihs)/hand-hygiene/tools/ipc-cc-mis.pdf?sfvrsn=425b25d_6&download=true)

Full list of relevant reading available at: <https://washinhcf.org/resource/summary-of-all-who-and-related-resources-on-wash-in-hcf/>