

Environmental Cleaning in Healthcare Settings: Challenges and Suggested Solutions

- Dr. MOUSTAFA ABDELNASSER
- Professor of Microbiology, Immunology & Infection Control,
- ESIC, ICAN & APIC MEMBER
- Faculty of Medicine, AL-AZHAR UNIVERSITY
- mostafa_online1@yahoo.com, mostafa.nasser@azhar.edu.eg
- WhatsApp: +20116189541



Introduction

- ▶ Environmental cleaning in our healthcare settings faces a great challenge, particularly in public hospitals.
- ▶ The healthcare environment can act as an amplifier of healthcare-associated infections (HAIs).
- ▶ Both patients and staff will be affected.
- ▶ HAIs may be increased especially in immunocompromised individuals.

WHO

- ▶ **WHO defines air pollution** as a contamination of the indoor or outdoor environment by any chemical, physical or biological agent that modifies the natural characteristics of the atmosphere.

Objectives

- ▶ Define the hospital environment.
- ▶ Explain the effects of ambient pollution (especially air pollution).
- ▶ Highlight the challenges and suggested solutions in this regard.
- ▶ Describe IPC's role in Hospital Design.

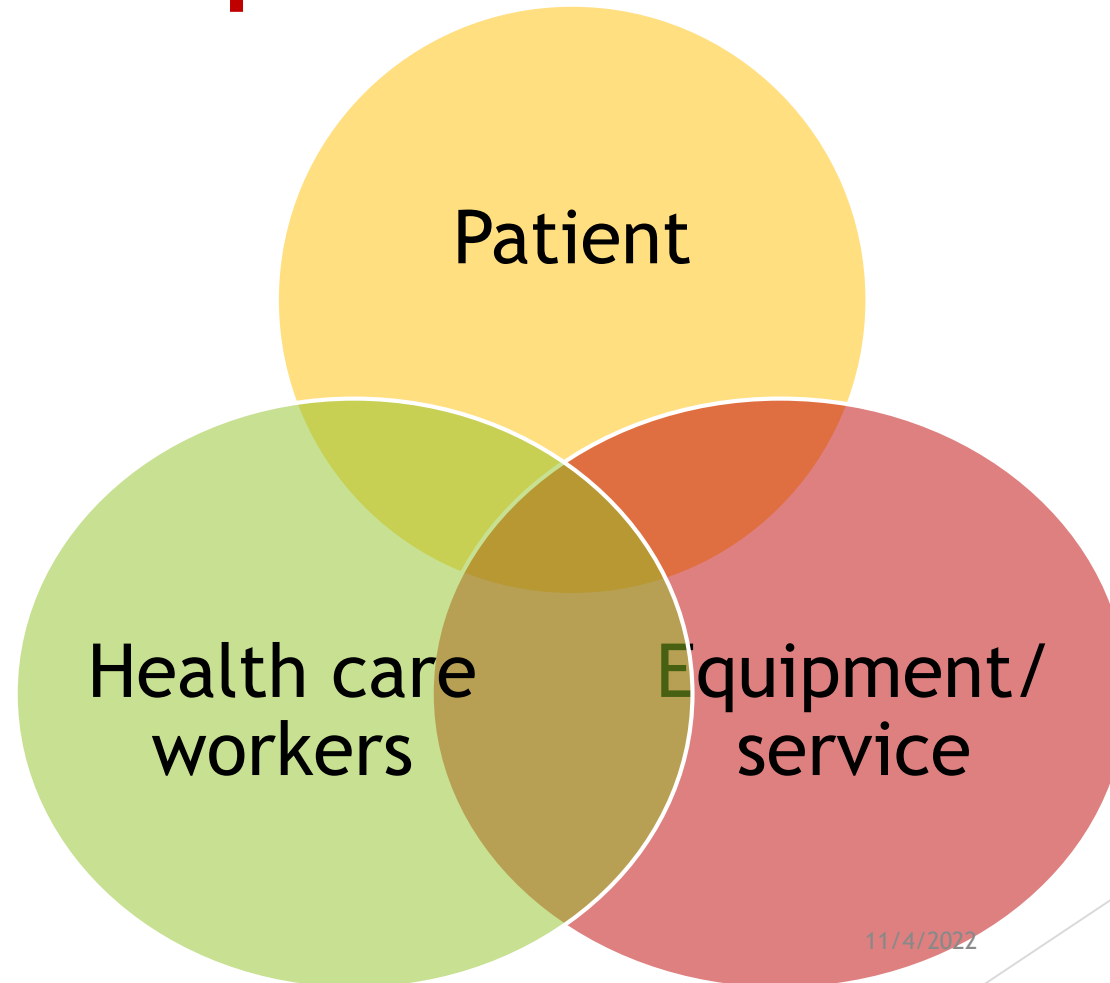
The hospital environment

- ▶ Healthcare settings are environments with a high prevalence of infectious disease agents
- ▶ Patients, staff, carers and neighbours of the healthcare setting face unacceptable risks of infection and hazards if environmental health is inadequate
- ▶ The healthcare setting might even become the epicentre of outbreaks of respiratory (such as influenza or gastrointestinal diseases (such as diarrhoea)).
- ▶ Some patients, staff and visitors may also be exposed to radiological or chemical hazards.

The significance of the environment in contamination

- ▶ The environment of care is the space around a patient or healthcare worker where direct or indirect contact occurs by those delivering healthcare.
- ▶ It comprises three elements; the physical space or building used for providing patient care; equipment used in providing patient care or used within operational procedures of patient care and healthcare staff.
- ▶ This physical space during in-patient care can be broadly categorized into 'high-touch' and 'low-touch' surfaces.

Relationship in a healthcare facility



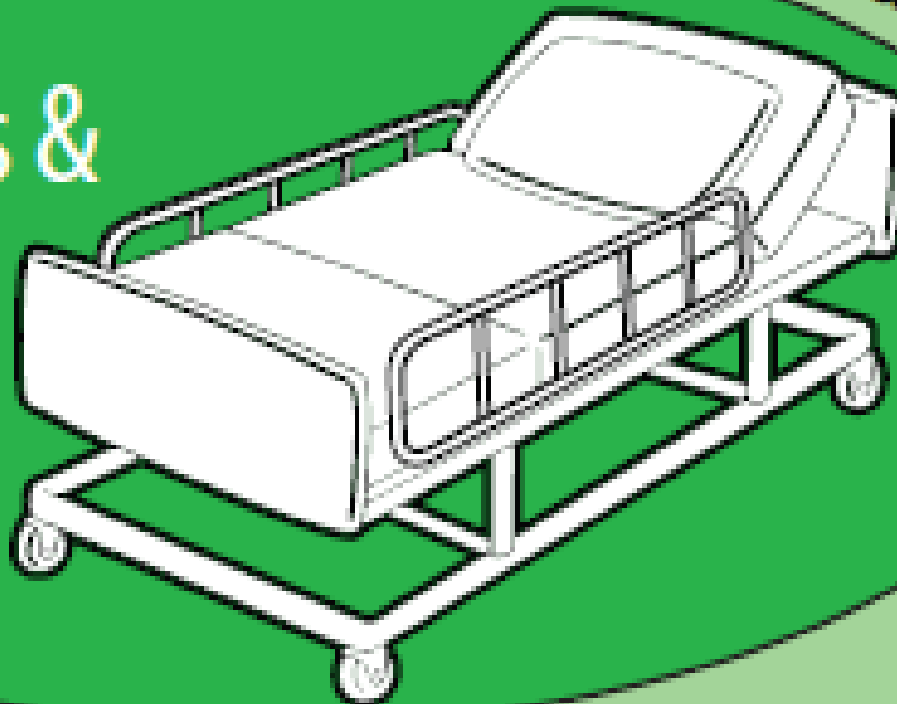
- ▶ Evaluation of Housekeeping Quality Service in Egyptian Hospitals: Public vs Private
- ▶ Article 16, Volume 12, Issue 2, September 2018, Page 241-264
- ▶ Ayda Saber; Sanaa Hamed
- ▶ Housekeeping services in a hospital is entrusted with maintaining a hygienic and clean hospital environment conducive to patient care. Housekeeping services have a direct effect on the health, comfort and morale of the patient, staff and visitors, hence is also an important public relations variable. The study was conducted on a sample of sixteen hospitals in Egypt. The chosen of hospitals was due to Public Vs private hospitals accordance to variety of the locations in Cairo, Luxor and Aswan, 500 questionnaires collected from the patients and their families through the period of May to August 2018. 421 of them were valid with rate 84.2% in the investigated hospitals. The aim of the questionnaire is to assess the level of housekeeping services and personal hygiene habits as well as their effects on patients' satisfaction. Most of the governmental hospitals being surveyed highlighted that room cleaning producers employees do and room cleaning bathroom producers employees do are still below the desired standard. Besides, housekeeping managerial skills in governmental hospitals are poor. On the other side, results obtained from the private hospitals highlighted that the applicable housekeeping procedures are more positive than proactive. Specific recommendations were suggested concerning the issue being researched.

Challenges

- ▶ **Structural design.**
- ▶ **Overcrowding in wards,**
- ▶ **Misuse of hand wash sinks,**
- ▶ **Hospital waste management**
- ▶ **Environmental cleaning,**
- ▶ **Human capacity development**
- ▶ **Organisation structure & Job discription**
- ▶ **Shortage of supplies,**
- ▶ **trained personnel and accountability.**
- ▶ **Compliance with hand-hygiene procedures and protocols,**
- ▶ **Funding of environmental cleaning programme**
- ▶ **Visiting hours,**

Shared equipment & common surfaces
Items touched during patient care

Patients &
direct
contact
items



High Touch Surfaces



The role of HEH in disease transmission

- Depends on the setting
- 50-70% of HAI are caused by contaminated hands
- Estimate 20-40% of HAI are spread through the healthcare environment



Hospital waste ???

- ▶ When you mix infectious waste and regular solid waste together, you are not permitted to separate them



- Once combined, the entire contents are considered infectious waste!

Medical waste poses health risk in urban areas



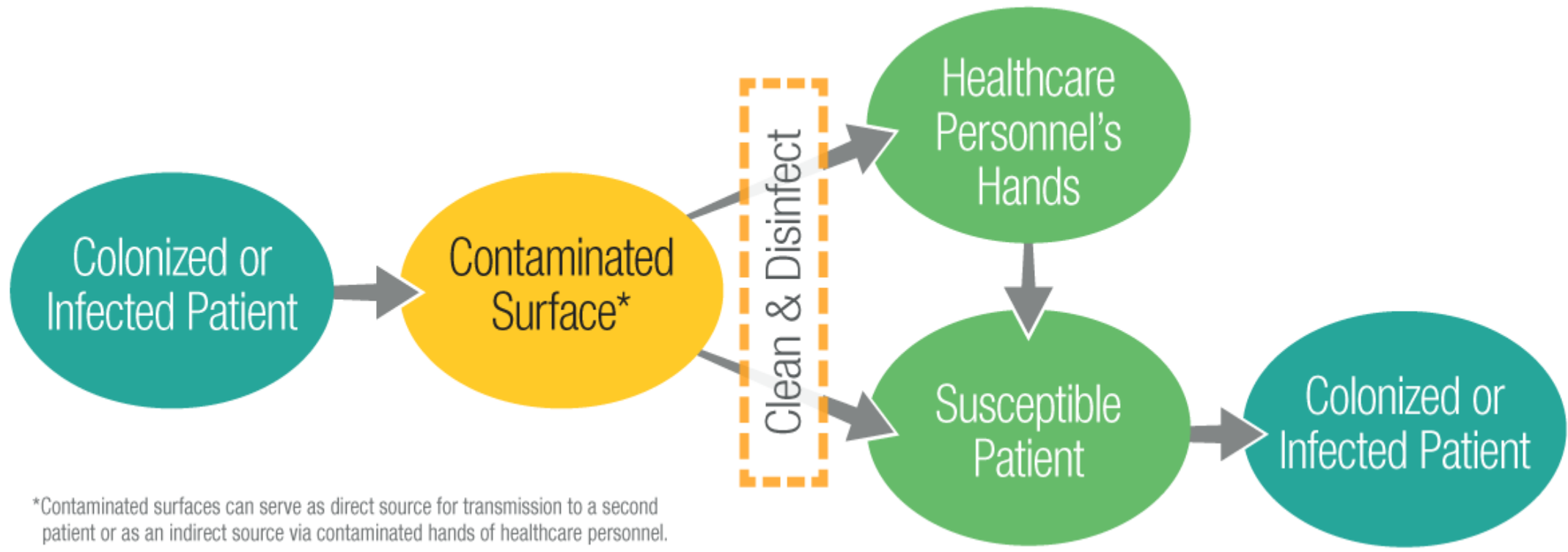
Suggested solutions

1. Assigned cleaners from a private company
2. Training (by IPC and company) before assignment and on the job.
3. Spraining supplies
4. Reallocate infrastructure (engineering control)
5. Reminder at the workplace
6. Reschedule visiting hours
7. Enough budget (availability of supplies)
8. Patient education (also family and other visitors)

Core Components of Environmental Cleaning and Disinfection

1. **Integrate** environmental services into the hospital's safety culture.
2. **Educate and train** all HCP responsible for cleaning and disinfecting patient care areas.
3. **Select** appropriate cleaning and disinfection technologies and products.
4. **Standardize** setting-specific cleaning and disinfection protocols.
5. **Monitor** effectiveness and adherence to cleaning and disinfection protocols.
6. **Provide feedback** on adequacy and effectiveness of cleaning and disinfection to staff and stakeholders.





Considerations during designing

- ▶ Involvement of multidisciplinary teams during the whole phase of project
- ▶ Must support functioning and be designed to ensure continued safe and effective services even during public health emergencies/ crisis
- ▶ Functional and Space requirements(between beds)
- ▶ Circulation and flows of (Patient, Staff, visitors, dirty and clean supplies)
- ▶ Equipment- fixed and movable

Considerations Conti...

- ▶ Design to be according to levels of care as needs are different
- ▶ Privacy and confidentiality of pts
- ▶ Safety from fire and falls, walls to minimize noise
- ▶ Lighting
- ▶ Ventilation quality(Natural)
- ▶ Water and Energy

Best Practices for environmental cleaning in healthcare facilities (CDC)

- ▶ The determination of environmental cleaning procedures for individual patient care areas, including frequency, method, and process, is based on the risk of pathogen transmission.

Best Practices (cont')

- ▶ **Risk-based environmental cleaning frequency principles**

Heavily contaminated surfaces & items > lightly or non-contaminated surfaces and items.

- ▶ **Vulnerability of patients to infection:**

immunosuppressed require more frequent and rigorous environmental cleaning

- ▶ **Potential for exposure to pathogens:**

High-touch surfaces (e.g., bed rails) > low-touch surfaces (e.g., walls).

Recommendations

Evaluation of Housekeeping Quality Service in Egyptian Hospitals: Public vs Private

Article 16, Volume 12, Issue 2, September 2018, Page 241-264 .

Ayda Saber; Sanaa Hamed

The hospital management should be organizing courses for housekeeping staff to train on:

- ▶ 1. Cleaning routines in the different areas of the hospital, including public areas, waiting rooms, general patient rooms, isolation rooms, bathrooms, and sluice rooms
- ▶ 2. The use of routine cleaning and terminal cleaning checklists
- ▶ 3. Cleaning methods and the appropriate use of cleaning equipment, detergents, and disinfectants
- ▶ 4. Waste and linen removal processes
- ▶ 5. Spills management
- ▶ 6. The importance of hand hygiene and correct hand hygiene methods
- ▶ 7. Correct use of PPE
- ▶ 8. Waste segregation and the safe handling of waste
- ▶ 9. Prevention of blood and body fluid exposure, including sharp safety and prompt reporting of incidents of exposure
- ▶ 10. Transmission risks in isolation rooms

Who cleans what?

Everyone is crucial to the outcome



Environmental Cleaning (30th ESIC Conference)



11/4/2022

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Role of IPC personnel

There should be a mandated policy to involve IPC personnel when constructing, rehabilitating and upgrading facilities

IPC personnel give guidance on:

- ▶ Lighting
- ▶ Ventilation
- ▶ Surfaces
- ▶ Traffic flow - patients/HCW and services
- ▶ WASH facilities





Training

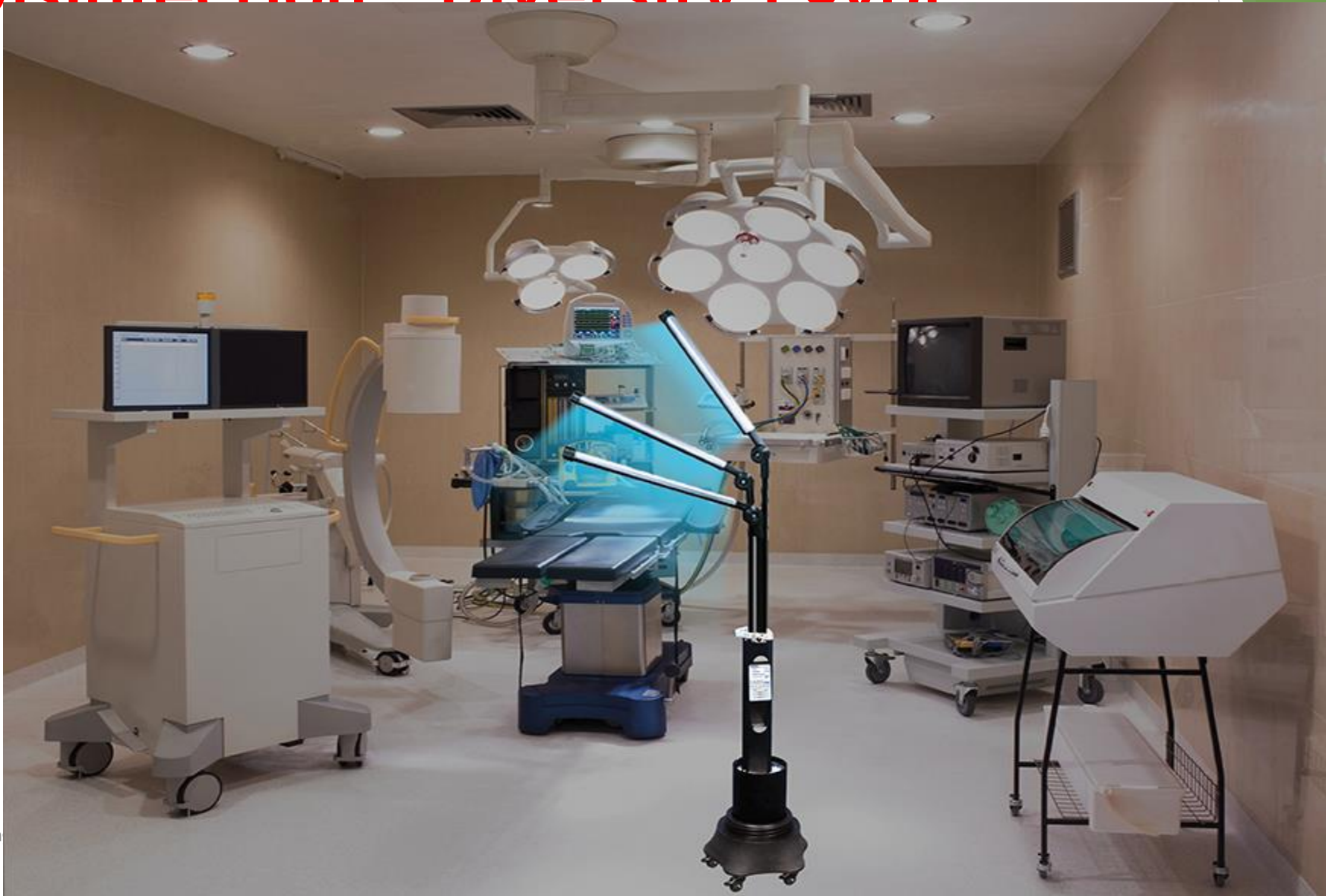
How to Manage Limited Budgets

1 	2 	3 	4 
Optimize your revenue opportunities	Plan, set up, and administrate budgets	Increase transparency of cost and revenue through Reporting	Reduce cost and increase efficiency in Supply Chain

**Every facility
should develop
cleaning
schedules,
including:**

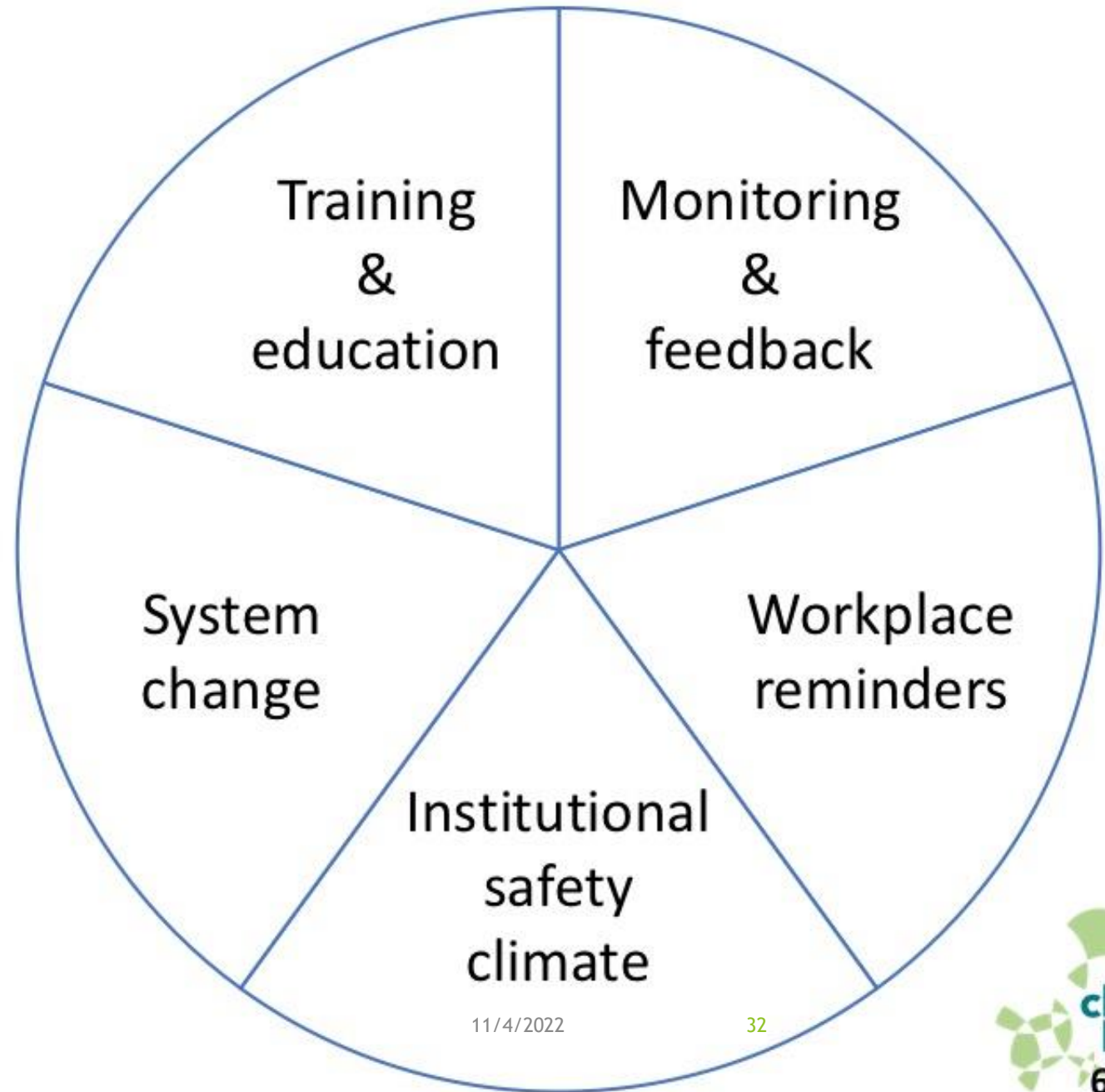
- Identifying
 1. the person responsible
 2. the frequency
 3. the method (product, process)
- Detailed SOPs for environmental cleaning of surfaces and noncritical equipment in every type of patient care area
- Cleaning staff must be properly trained and supervised.

UV -Disinfection - Diversity Fovnt



Environmental Cleanin

The Multimodal Strategy for Healthcare Environmental Hygiene



Scope: Healthcare Environmental Hygiene (HEH) technical components



The My Five Moments approach

Making it easier to

- understand
- remember
- practice

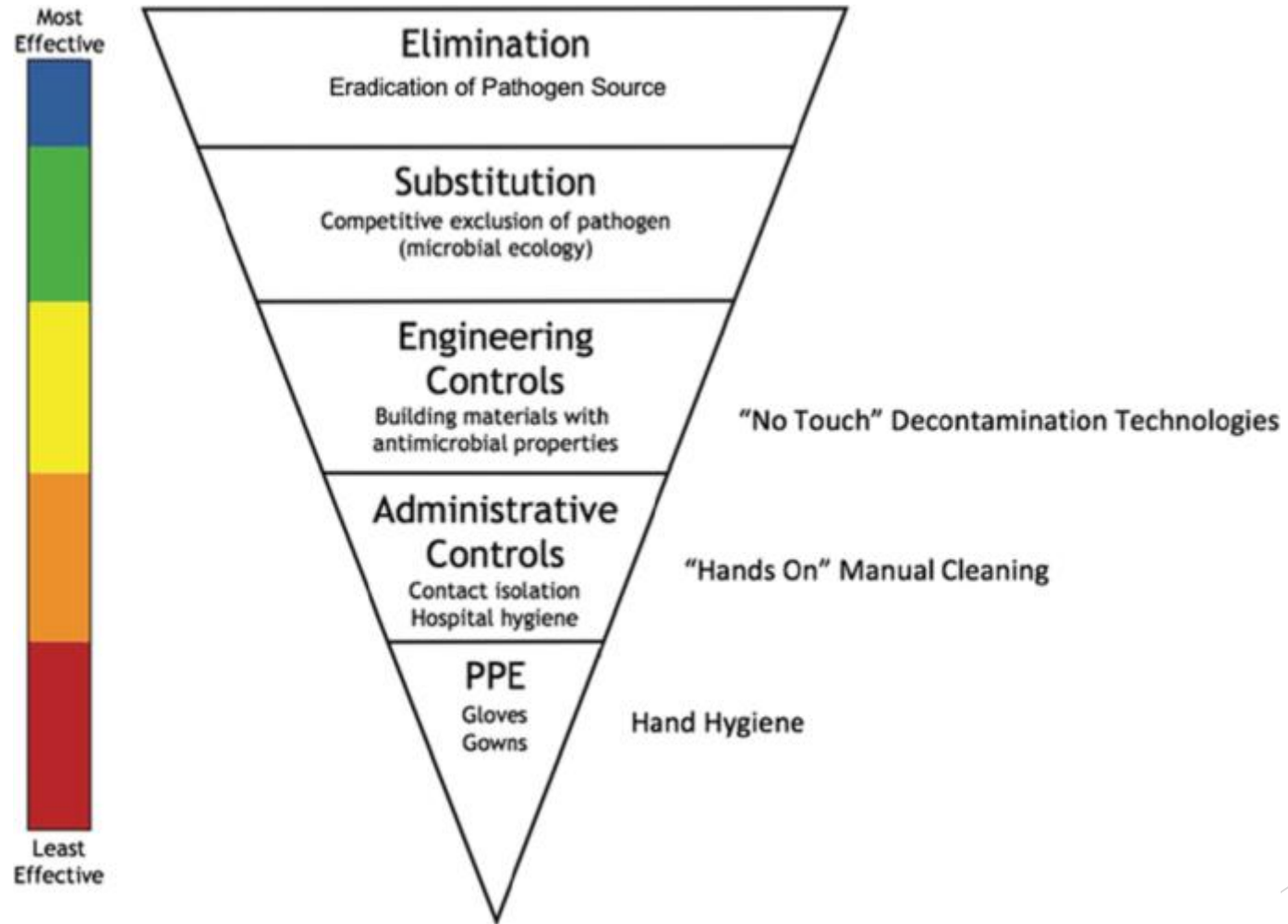
the hand hygiene indications at the point of care

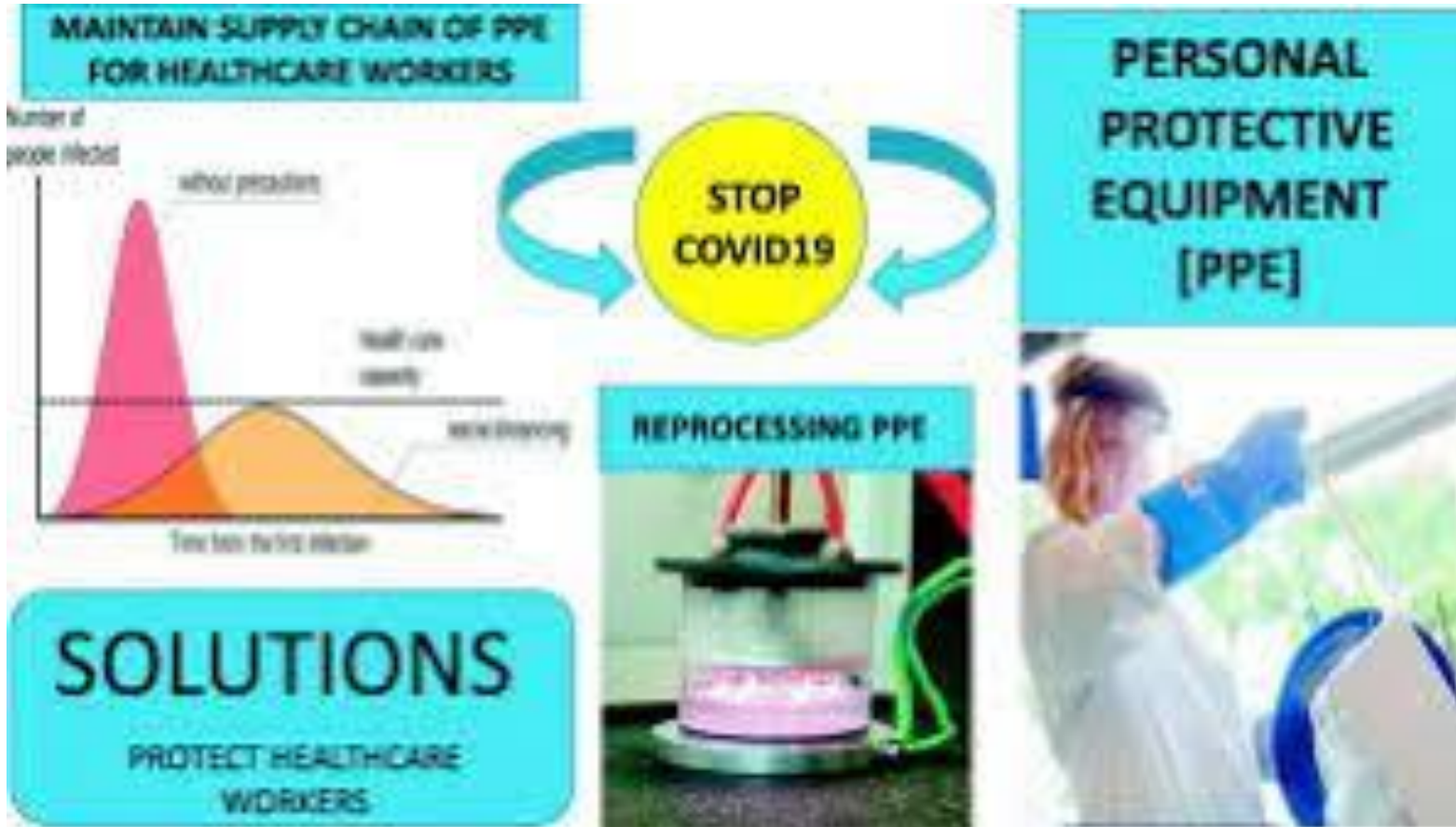
My 5 moments for HAND HYGIENE



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Role of patients in keeping the environment clean

- ▶ Ensuring that waste is being disposed of in appropriate bins.
- ▶ Reporting any environmental contamination that needs to be addressed.
- ▶ Recommend any environmental cleaning practices through suggestion boxes.
- ▶ Participate in health talks on environmental cleaning.

conclusion

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- ▶ Environmental pollution, especially, in healthcare settings has a devastating effect on patients and staff.
- ▶ Adequate resources must be devoted to environmental cleaning in all healthcare settings to prevent the spread of infections.
- ▶ Cleaning staff must be properly trained and supervised.
- ▶ Leadership and trained personnel are crucial to driving and sustaining the process of environmental cleaning.
- ▶ Ensuring environmental cleanliness is a commitment for all staff regardless of cadre.
- ▶ Staff and patient cooperation will also help in solving this problem.

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Thank You

