

HOTHREAT

C B R N

Protection guideline for cleaning services for hotels



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the European Union

hothreat.eu

Document introduction

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Project consortium

Research, expertise, technology providers



End-users



Law enforcement agencies



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| The Center for Security Studies | EL |
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1. Introduction to the HOTHREAT project

Hotels, leisure and conference facilities have long been targets of terrorist attacks and the threat level is still increasing. Due to its characteristics, this sector is vulnerable to attacks, and in last 25 years over 160 attacks were conducted. Chemical, biological and radiological/nuclear (CBRN) threats are emerging risks that the European public must take into consideration. Notably, the use of those agents can be often combined with explosive devices – CBRNe.

The HOTHREAT project aims to address the existing gap in the protection of hotels from CBRNe terrorist threats by bringing together a consortium composed of private and public entities, experts, end-users, security companies and law enforcement agencies. Indeed, the Consortium is composed of 19 partners from 8 EU Member States.

The main objective of HOTHREAT is to increase the safety of EU MS society from CBRNe threats by targeting hotels and conference centres. To do so, during the project cycle, comprehensive vulnerability and needs analysis will be conducted as well as best practices identification to elaborate tailor-made measures for CBRNe protection. The measures include recommendations for prevention, protection and response procedures. Moreover, CBRNe measures include recommendations for the adoption of protective equipment, multi-service communication models, programmes for VIP visits, cleaning services, food defence, epidemiology inquiries and CBRNe emergency application for mobile devices integrated with AR. Finally, training sessions will be delivered for hotel employees through a series of piloting and large-scale exercises to ensure the adoption of high-quality and well-addressed measures.

Specifically, Work package 3 is the core of the HOTHREAT project with the overreaching aim of creating a comprehensive system supporting hotel and conference centres against CBRNe.

The document at hand represents a key project legacy thus contributing to the creation of a comprehensive system supporting hotel and conference centres against CBRNe by providing a guideline on topic.

2. Scope and objective of the guidelines

The guidelines are part of a comprehensive program for cleaning services, which are identified as a critical group in the detection and response to potential threats related to Chemical, Biological, Radiological, and Nuclear (CBRN) incidents. The program encompasses the creation of guidelines, procedures, and schemes aimed at equipping cleaning service personnel with the necessary knowledge and tools to effectively identify and respond to CBRN threats.

The objective of these guidelines is to enhance the preparedness and resilience of cleaning services in the face of CBRN challenges, thereby contributing to the overall safety and security of the environment in which they operate.

3. Threat recognition

Guidance on how to recognize the CBRN threat

What is CBRN – it is an acronym used to describe weapons by the effects of:

Chemical



Biological



Radiological



Nuclear



3.1. Chemical

Poisoning or damage caused by chemicals like chemical warfare agents, commercial chemicals or household chemicals.

Chemical Warfare Agents

Chemical agents are toxic compounds housed in munitions delivery systems like mines,

rockets, projectiles, or bombs designed to disperse these substances.

How do we divide Chemical Warfare Agents (CWA)

Nerve agents



They are named for their impact on the functioning of the nervous system and are considered as the most toxic CWA. They can cause death within minutes to hours after exposure, depending on the concentration.

Blister agents



Blistering agents are toxic compounds that cause skin injuries similar to burns. When inhaled, they can damage the upper respiratory tract and lungs, leading to pulmonary oedema. They can also cause severe eye injuries. Some of them have a specific smell of mustard or horseradish.

Blood agents



Blood agents are chemicals that are transported by the bloodstream and inhibit the ability of blood cells to transfer oxygen which reduces the process of transporting oxygen from the lungs to the cells. Exposure to low concentrations of blood agents can cause weakness, dizziness, headache, confusion, and sometimes nausea and vomiting. At high concentrations, blood agents can completely halt oxygen transport, leading to death by suffocation and can cause severe toxic effects within seconds.

Choking agents



Choking or pulmonary agents are chemicals designed to disturb victim's ability to breathe. Those agents affect the respiratory tract- nose, throat airways and lungs. They operate by building-up of fluids in the lungs, which blocks oxygen exchange and leads to suffocation. Those agents are corrosive and could cause blurred vision and severe eye burns. Inhalation could cause burning of the throat, coughing, vomiting, headache, pain in chest, tightness in chest, and respiratory and circulatory failure.

Toxins



Toxins are a group of agents that lie between chemical and biological weapons which consists of substances produced by living organisms such as bacteria, fungi, terrestrial animals, or marine animals. The most toxic substance on Earth is botulinum toxin (botulism toxin). This toxin is so potent that 1 gram of it, if applied properly, could kill a million people. The most common



natural source is
spoiled meat.

Industrial Chemicals

Industrial chemicals are substances manufactured or used in industrial processes that have the potential to cause harm to humans, animals or the environment due to their toxic or otherwise hazardous properties. These chemicals can include solvents, heavy metals, pesticides and various other compounds used in manufacturing, agriculture and other industries.

HAZARDS

Acute Toxicity



Certain chemicals can cause immediate harm upon exposure, leading to symptoms such as nausea, vomiting, respiratory distress, or even death in severe cases.

Chronic Health Effects



Prolonged or repeated exposure to toxic industrial chemicals can result in chronic health conditions such as cancer, neurological disorders, reproductive issues, or organ damage.

Environmental Pollution



Release of toxic chemicals into the environment can contaminate soil, water bodies, and air, leading to adverse effects on ecosystems, wildlife, and human populations living in the vicinity.

Fire and Explosion Hazards



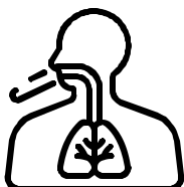
Some chemicals are highly flammable or reactive, increasing the risk of fires, explosions, or other catastrophic incidents in industrial facilities.

Chemical Burns and Skin Irritation



Contact with certain chemicals can cause burns, irritation, or allergic reactions on the skin or mucous membranes.

Respiratory Sensitisation Hazards



Inhalation of irritating or sensitizing fumes, vapours, or dust particles from industrial chemicals can lead to hypersensitivity of airways or allergic reaction of skin upon exposure. Repeated exposure requires lower doses of sensitizer than original one.

Overall, commercial or industrial chemicals present multifaceted hazards, that require careful management, handling, and regulatory oversight to mitigate their adverse effects on human health and the environment.

Chemical threats

Contamination by commercial chemicals can occur in several ways, among the others:

1. Malevolently dispersed chemicals e.g., **in a terrorist attack**
2. Spilled or released industrial or utility chemicals e.g.
Through **mishandling** or **failing to follow** instructions of use

Through **illegal dumping or improperly managed waste disposal**: Improper or illegal disposal of industrial waste can result leaks and seepage into the environment that causes soil and groundwater contamination.

When waste pharma products are disposed of to the environment. These products are designed to be **active even in high dilution**, so when flushed to the public sewage or sanitary wastewater system may cause disproportional damages of various kinds.

3. Through accidental release during regular industrial activities: production, processing, wastewater and atmospheric discharges or accidents during transport of dangerous goods. Released material containing hazardous chemicals may end up in the rivers, lakes, dispersed in air and transported in long distance or be absorbed by soil and contaminate it for a long time.

Household chemicals



A separate group that poses a risk to health and life are household chemicals. They can pose dangers if not handled properly. Some common household items such as pesticides, cleaning and pharmaceutical products as well as certain cosmetics contain chemicals that can be toxic if ingested, inhaled, or in contact with the skin. Improper storage or mixing of these chemicals can lead to accidents, poisoning

, or fires. Therefore, it is crucial to handle and store household chemicals according to the manufacturer's instructions, keep them out of reach of children and pets, and dispose of them properly to minimize the risk of accidents and exposure. Never dispose of those substances to hotel or home sanitary system and sewage!

3.2. Biological



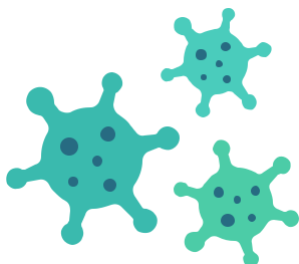
Biological threat in CBRN refer to hazards posed by biological agents such as bacteria, viruses, fungi, or toxins that can cause disease or death in humans, animals, or plants. These hazards can arise from natural outbreaks, deliberate releases (bioterrorism), or accidents in laboratories or industrial settings.

Bacteria



- Single-celled organisms that can cause infectious diseases.
- They can be highly contagious and difficult to treat, requiring specific vaccines, antibiotics or target medicines
- Examples: *Bacillus anthracis* (anthrax), *Yersinia pestis* (plague), *Francisella tularensis* (tularemia).
- They can be relatively easy to culture and spread.

Viruses



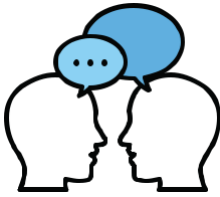
- Small infectious particles that require host cells to replicate.
- Examples: Variola virus (smallpox), Ebola virus.
- They can be highly contagious and difficult to treat, requiring specific vaccines or antiviral

Fungi



- More complex organisms than bacteria and viruses, capable of causing diseases in humans, animals, and plants.
- Examples: *Histoplasma capsulatum*, *Aspergillus*
- Fungal infections can be difficult to treat, especially in individuals with weakened immune systems.

Modes of Transmission



Biological agents can spread through various means, including air (aerosols), water, food, and direct skin contact. Understanding the modes of transmission is crucial for implementing effective containment and control measures.

Incubation Period



Most biological agents have long incubation periods, which can complicate detection and response efforts. The time between exposure to a biological agent and the onset of symptoms varies depending on the type of hazard and many other circumstances. However, that period is considerably longer than in the case of chemical agents, ranging from a few hours to as much as several tens of days.

Diagnosis and Treatment



Rapid identification of biological agents and timely medical intervention are essential to mitigate the effects of biological hazards. This may include the use of vaccines, antibiotics, antivirals, and other medical countermeasures.

Public Health Impact



Biological hazards can overwhelm healthcare systems, cause mass casualties, and create widespread fear and panic. Effective public health preparedness and response strategies are essential to manage the consequences of biological incidents.

Environmental Persistence



Some biological agents can persist in the environment for extended periods, posing long-term risks to human health and requiring extensive decontamination efforts.

Biological hazards in the CBRN context represent a significant threat due to their potential to cause widespread harm and disruption. Preparedness, early detection, and effective response are critical components in managing these hazards.

3.3. Radiological and nuclear



Radiological and nuclear hazards in CBRN refer to threats posed by the release of radioactive materials or the use of nuclear weapons. These hazards can cause severe health effects, environmental contamination, and widespread panic.

Radiological Hazards

Radiological threat involves the release of radioactive materials, which emit ionizing radiation. These materials can come from various sources, such as medical equipment, industrial sources, or accidents at nuclear facilities.

Radiological Dispersal Device (RDD)



Also known as a "dirty bomb," this device combines conventional explosives with radioactive materials. When detonated, it spreads radioactive contamination over a wide area, posing health risks and causing panic and disruption.

Health Effects



Exposure radiation to tissues and organs in the body (through an external radiation source or inhaled, absorbed through the skin or ingested in contaminated food or water) can lead to acute radiation syndrome (ARS), increased risk of cancer, genetic mutations and other serious health problems. The severity of these effects depends on the dose and duration of exposure.

Environmental Contamination



Radioactive materials can contaminate air, water, and soil, leading to long-term ecological damage and rendering areas uninhabitable. With contamination in facilities such as a hotel, there is a high probability that to be deconstructed.

Nuclear Hazards

Nuclear hazards refer to the dangers associated with nuclear weapons or accidents at nuclear power plants.

Nuclear Weapons



These are explosive devices that derive their destructive power from nuclear reactions, either fission (atomic bomb) or a combination of fission and fusion (thermonuclear bomb). The detonation of a nuclear weapon results in massive destruction, intense heat, and radiation.

Health Effects



Immediate effects include blast injuries, burns, and acute radiation sickness. Long-term effects can include cancer, genetic damage, and psychological trauma. The fallout from a nuclear explosion can spread radioactive particles over vast areas, causing prolonged exposure.

Nuclear Accidents



Incidents like the Chernobyl disaster or the Fukushima Daiichi nuclear meltdown release large amounts of radioactive materials into the environment. These accidents can lead to severe health effects, long-term displacement of populations, and extensive environmental contamination.

Key Concepts



Ionizing Radiation: This type of radiation has enough energy to remove tightly bound electrons from atoms, creating ions. It includes alpha particles, beta particles, gamma rays, and X-rays.

Contamination vs. Exposure: Contamination refers to radioactive material being deposited on surfaces, skin, clothing or ingested or inhaled. Exposure refers to exposure to ionizing radiation rays. Distancing from source of ionizing radiation stops exposure while contamination needs special treatment.

Decontamination and Protection: Measures include removing contaminated clothing, washing exposed skin, and taking appropriate medical product (like potassium iodide to block radioactive iodine uptake by the thyroid). Protective equipment and shelters can also reduce exposure.

In summary, radiological and nuclear hazards present severe risks to health and safety. Preparedness, rapid response, and effective mitigation strategies are essential to manage these threats and protect public health and the environment.

4. CBRN response procedures

Guidance on how to recognize the CBRN threat and how to respond



To successfully carry out an attack using CBRN agents, it is essential that they are properly delivered. A distinction is made between improvised dispersal devices (IDD) and improvised explosive devices (IED), where CBRN agents are sprayed using explosive charges (CBRNe). How do you recognise such devices and what to do if we find something suspicious?

Use 4C and HOT procedures

4C procedure

- **C- CONFIRM**
 - HOT protocol
- **C- CLEAR**
- **C- COMMUNICATE**
- **C- CONTROL**

HOT protocol

- **H- HIDDEN**
- **O- OBVIOUSLY SUSPICIOUS**
- **T- TYPICAL**

4.1. 4C

4.1.1.C- CONFIRM

C- CONFIRM

- C- CLEAR
- C- COMMUNICATE
- C- CONTROL



Based on the characteristics of the object and the circumstances, try to confirm whether the object is suspicious or not. To confirm use HOT protocol (p. 4.2). **If you classify the found object as suspicious then continue with procedure 4C**

4.1.2. C - CLEAR

C- CONFIRM

C- CLEAR

C- COMMUNICATE

C- CONTROL

Clear immediate area of bystanders and yourself. The device may pose a hazard. Remember that if you are injured you will not be able to follow safety procedures, you will not help others and you will become a burden to the emergency services yourself. If you are unsure whether the escape route is safe (the hazards you try to avoid may not be the only ones in the premises), seek control room/ monitoring or CCTV staff's advice, chances are they have a larger picture and will lend you a safe route with the help of monitoring system.



- Do not touch, tamper with, move to another location
- Do not cut cables, wires or other attached objects
- Do not change natural or artificial lighting
- Do not smoke or use an open flame, eat or drink
- Do not alter any switches



- Leave the room immediately
- Lock the door
- Try to turn off ventilation if it is safe to do
- Take control and move people/guests to a safe distance (knock the door, shout, use all available resources to do it)
- This is a general rule, but in general, if you can't see the object, you are better protected from it. Consider what you can hide behind. Choose something sturdy and stay away from glass, such as windows
- Cordon off the area

If you have been exposed to a hazardous substance, follow the REMOVE x 3 procedure.

4.1.3. C- COMMUNICATE

C- CONFIRM

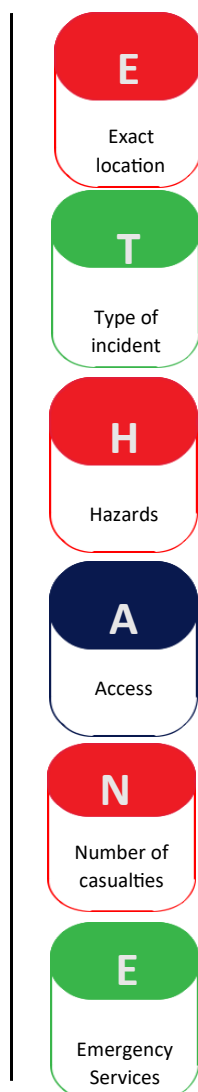
C- CLEAR

C- COMMUNICATE

C- CONTROL

Inform safety personnel as soon as possible so that they can activate safety procedures. Do not use mobile phones or radios within a radius of fifteen meters from the suspicious object. Remember at every step that your safety is the most important.

Inform your superiors at each stage of the procedure (use **ETHANE** protocol¹).



Give the **exact location** of the incident (floor, wing, room), this will assist the emergency services in reaching the scene of the incident and give information to the security personnel on further procedures to be undertaken, e.g.:

Floor 6, wing east, room no. 66.

What **type of incident** we you dealing with (terrorist attack, CBRN, bomb, etc.)e.g.: **Probably some CBRN dispersion**

What kind of **hazard** we are dealing with, e.g., **irritating or choking gas coming out of luggage**

This information will also help to establish safe evacuation routes, e.g.: **Escape staircase 2 Provide safe access to the area of the incident site affected by smoke**

Specify the **number of casualties**, this will be key information for the emergency services as to what forces and resources they will need, e.g.: **2 people unconscious, 3 people coughing with mobility difficulties**

Which, and how many, **emergency responder agencies are required** or are already on-scene?

¹ ETHAN protocol presented here is a simplified, designed for internal communication, version of ETHANE protocol for more information visit JESSIP web page (<https://www.jesip.org.uk/joint-doctrine/m-ethane/>)

4.1.4. C- CONTROL

C- CONFIRM

C- CLEAR

C- COMMUNICATE

C- CONTROL

Control the cordoned area. Guests and other individuals should not have access to the area until it is deemed safe. This will prevent accidental entry into the contaminated area and minimise casualties. Remember to only perform the steps of the procedure if you are sure, you are safe.

4.2. HOT protocol

- H- HIDDEN
- O- OBVIOUSLY SUSPICIOUS
- T- TYPICAL

4.2.1. H – HIDDEN



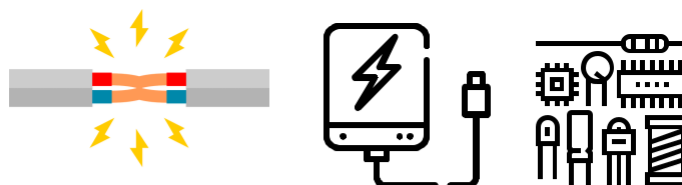
An item that is intentionally placed in a location or manner designed to make its detection or discovery difficult. Deliberate concealment may involve physically hiding the object or masking its presence using various camouflage techniques.

4.2.2. O – OBVIOUSLY SUSPICIOUS

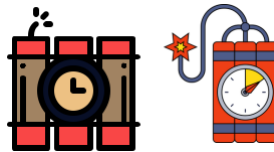


It is an item that immediately raises suspicion due to its location, appearance, or other characteristics like:

protruding electrical wires, power sources or electronic components connected to other equipment



clocks and other time devices combined with any other object



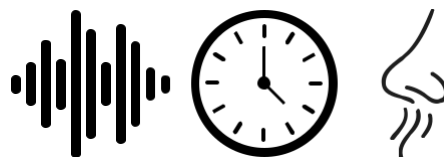
antennas, mobile phones, radios combined with other items



objects of military origin (weapons, cartridges, bullets, grenades, explosives, etc.)



emitted sounds (ticking, hissing, etc.), fumes, strange smells, smoke.



containers with chemicals, laboratory equipment, PPE



4.2.3. T – TYPICAL



Is the object typical for a given place – an object that, by its appearance, function, and location, aligns with the characteristics of a specific environment. Its presence is natural and expected, consistent with the daily use and function of the space in which it is found.

4.3. 5S procedure

Sights
 Signs
 Symptoms
 Smell
 Sound

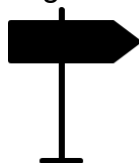
An additional tool to help identify hazardous substances, equipment and to recognize an attack carried out is the 5S procedure. It is an acronym from the first words of the words that constitute the procedure.

S- Sights



Are there any signs of hazardous materials at or near the scene? Look for the presence of technical/safety signs or numbers, safety data sheets, containers with hazardous materials, vehicles or warning signs, areas where hazardous materials may be stored or used. What can be observed that might explain the situation? The lack of a simple explanation may indicate the presence of hazardous materials

S- Signs



Are there any signs of the possible presence of hazardous materials? Look for people exhibiting unexplained symptoms of illness, unexplained vapor clouds or fog, oily droplets on surfaces or water; dead or distressed animals or birds, withered plants, unusual materials or equipment at the scene.

S- Symptoms



Are there multiple casualties with unexplained symptoms or symptoms that may indicate the presence of hazardous material? Irritation of the skin, eyes, airway, breathing difficulties, nausea, vomiting, sweating, pinpoint pupils or blurred painful vision, twitching, fitting or unconsciousness, unexplained fatalities. Additional support is provided by Procedure 1,2,3+ described below in this document.

S- Smell



Are there any unusual smells or reports of odours that do not fit the situation? For example, the smell of a swimming pool, explosives, almonds, ammonia, fuel, or something burnt.

S- Sound



What can be heard, and what are the reports of unusual sounds from others inside buildings, vehicles, containers, or bags? For instance, a hissing sound or escaping gas, glass/ampoule breaking inside a backpack, a firecracker, gunshot, or explosion

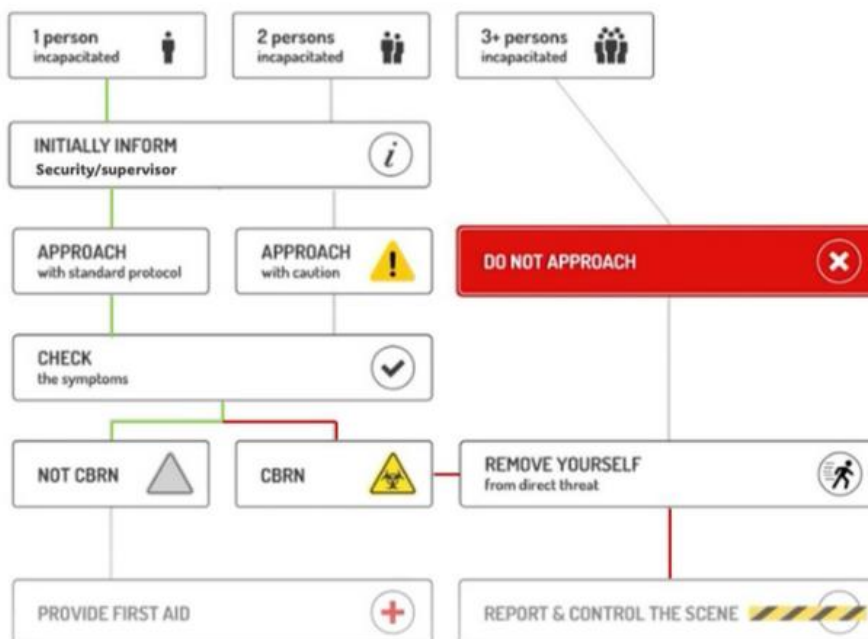
4.4. 1,2,3+ procedure

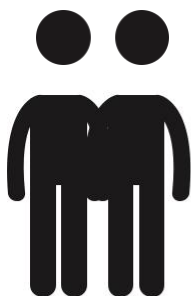
This procedure emphasizes acting according to the number of observed victims. Important: if you observe several (3 or more) incapacitated casualties without an explainable reason - **DO NOT APPROACH**. If you become another victim yourself:

- You will not be able to help anyone,**
- You will not be able to relay crucial information,**
- You will become an additional burden for emergency services**

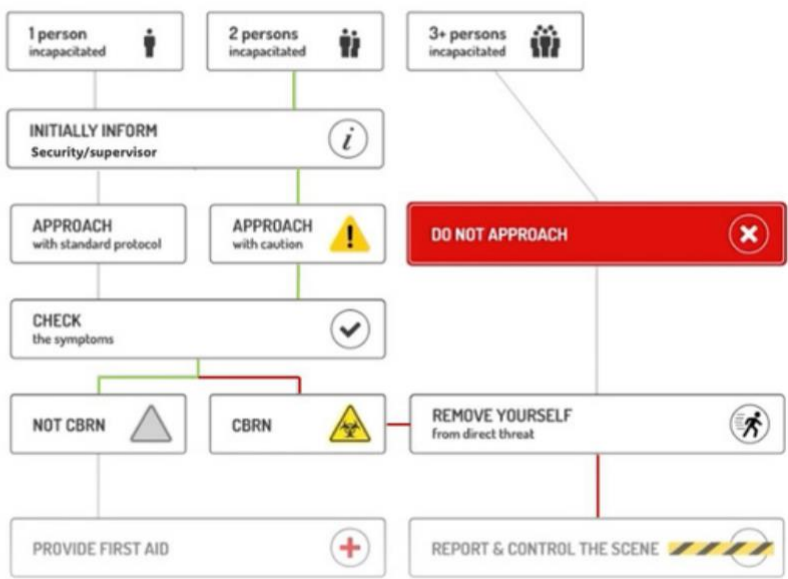


One person incapacitated with no obvious reason: initially inform the supervisor/security, you can approach using standard protocols, while still putting your safety first. Check the symptoms first using 5S procedure. CONSIDER the presence of hazard materials as one possibility. Provide first aid if there are no CBRN or other threat indicators. If you suspect CBRN threat, remove yourself to a safe distance and proceed according to 4C procedure.





Two people incapacitated with no obvious reason: approach with caution using standard protocols: initially inform the supervisor/security, while still putting your safety first. Check the symptoms first using **5S** procedure. **CONSIDER** the presence of hazard materials as one possibility. Provide first aid if there are no CBRN or other threat indicators. If you suspect CBRN threat, **REMOVE** yourself to a safe distance and proceed according to **4C procedure**.



Three or more people in close proximity, incapacitated with no obvious reason: **DO NOT PROCEED** any closer, putting your safety first: ASSUME the presence of hazardous materials, proceed according to **4C procedure** and **REMOVE x 3 procedure**.



4.5. REMOVE x 3 Procedure

REMOVE
REMOVE
REMOVE

The REMOVE x 3 procedure is used when a CBRN hazard is confirmed. If you suspect that any persons have been exposed to a harmful substance, move away to a safe distance. Remember:

Removing oneself from the area of exposure, removing outer clothing and removing substances from the skin is the only effective method of minimizing the effects of the attack.

REMOVE
REMOVE
REMOVE

REMOVE affected individuals and yourself from the direct threat.



Remember:

- fresh air is important
- keep a safe distance from affected persons
- never enter an affected area (you don't have the appropriate protective equipment only professional emergency services have them)
- if you direct affected people remotely, do so from a safe place
- give short, concise instructions easy to understand (contact with the injured will be difficult)
- be aware that not everyone understands your language

REMOVE
REMOVE
REMOVE

REMOVE outer clothing if it has been affected by the substance



- try to avoid pulling clothing over the head if possible
- do not attempt to remove clothing stuck to the skin
- do not smoke, eat or drink once this has been done,
- move away from the discarded clothing
- if you instruct someone to undress, do so from a safe distance

REMOVE
REMOVE
REMOVE

REMOVE the substance from the skin.

1. Is the substance in **liquid** form? – **adsorb** the substance from skin using **dry** adsorbents (paper towels, towels, napkins, adsorbent fabric, powder)
2. Is the substance in **powder/solid** form or the skin
3. +is **painful or itchy?**
 - RINSE the affected area with lots of water
 - use ANY available water source to rinse the affected part of the (tap, shower, bottled)
 - apply water continuously until medical personnel advise you to stop
 - try to avoid the water running onto unaffected parts of the body



5. DOING THE JOB

5.1. Basic sanitary procedures



Conducting basic sanitary procedures aimed at maintaining cleanliness in hotels is a key element in both preventing the spread of diseases and effectively combating viruses and bacteria when such threats arise.

The primary task of the cleaning service in hotel facilities is to maintain cleanliness in public areas (corridors, staircases, restaurants, restrooms) as well as directly in the guest rooms.



Regarding the maintenance of hotel rooms, this process can be divided into two stages: tasks that arise from daily duties and cleaning the room immediately after a guest's stay, simultaneously preparing the room for the next guest.

When it comes to cleaning public areas, cleaning and disinfection activities are carried out according to a planned schedule or in response to unexpected events such as removing vomit or spilled liquids.

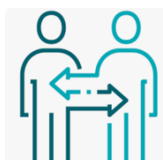
In extraordinary situations such as poisonings, epidemics, and other forms of mass infections that could occur in a hotel, the scope of cleaning and disinfection tasks should be meticulously planned, considering the safety of both: guests and the cleaning service. Often in such situations, as exemplified by the COVID-19 pandemic, recommendations for specific procedures to handle the threat are provided by local or national epidemiological authorities.



The main goal of the hotel industry is to protect and care for guests throughout their entire stay. This important aspect of business operations carries the responsibility for ensuring safety not only in a general sense but also in terms of sanitary and epidemiological conditions, to guarantee the comfort and well-being of guests. Providing high-quality resources, such as daily updates on the health status of employees and communication regarding any health incidents occurring among guests, helps reinforce the perception that safety is always a top priority.



Each interaction between housekeeping staff and guests can carry the risk of transmitting pathogenic microorganisms. In practice, guests rarely communicate with the cleaning staff unless they have a specific need, so it is important to be aware of this and ready to respond appropriately. Maintaining proper contact with clients at the cleaning service level can significantly contribute to the rapid assessment of dangerous situations, thereby enabling the implementation of procedures in case of illnesses, viral infections, epidemics, or other CBRN threats.



To this end, it is important to train staff in communication principles with guests and to implement interaction standards at the client/staff level, even in conflict situations. Employee education should include guidelines on positive actions, identifying negative behaviours, and possible responses to them.

These principles include:

- Providing guests with information (about the facility, the area, tourist attractions, transportation, local customs, currency, etc.).
- Handling complaints in a professional manner.
- Respecting the guest's need for confidentiality and privacy.
- Ensuring a safe environment for guests during their stay at the facility.



Key points for communication with visitors

- Always remain polite, but do not smile when the guest is complaining.
- Listen without interrupting.
- Know the proper procedure and establishment policy for handling complaints.
- Ask the guest how they would like the problem to be resolved.
- Focus on the problem and do not take the complaint personally.

5.2. DEALING WITH GUESTS in case of an outbreak



When it is confirmed that there is a viral outbreak it will be necessary to inform guests that there is an outbreak. This may include guests already staying on site, incoming guests or guests that have recently left. Advice should be sought from the Outbreak Coordinator² and Communications³ before any information is issued. Some customers may be sceptical of your motives and will believe that the outbreak is due to food consumed on the premises, therefore it is important to stress that the illness is a virus which is spread by person-to-person contact. You may receive complaints from guests who have left the hotel. Whenever dealing with guests who are ill it is imperative that you do so with an appropriate compassion and are respectful of their condition. Guest Letters Template may be used as templates but should be tailored to each hotel and situation.



The duties of the Guest Welfare Coordinator⁴ would include:

1. Point of contact for concerned/affected guests in an advisory role.
2. Provision of clean towels (by contacting housekeeping/cleaning team).
3. Provision of drinking water and food.
4. Contact with family members if require.
5. Liaise with medical services.
6. Arrangements for a longer stay if they are unfit to travel.
7. Encourage the guests to stay in their rooms to prevent cross contamination to other areas/ persons.
8. Supply advice notices and letters to the guests.



Preventive actions of the housekeeping staff:

1. Knowledge of potential hazards associated with the workplace and tasks performed.
2. Using appropriate protective equipment when working with cleaning agents.
3. Frequent hand washing, important step in preventing infections.

² National body responsible for management of outbreak

(i.e. Ministry of Health, Epidemiological or Sanitary Authority)

³ A person (or office, department) in the hotel tasked to communication with geusts

⁴ A person from the hotel entrusted with supervising and coordinong house keeping services in case of outbreak

4. Wearing personal protective equipment suitable for the task being performed.
5. Familiarity with emergency contact numbers and keeping them readily accessible.
6. Maintaining equipment and tools in good working condition.
7. Knowledge of safety data sheets for hazardous substances contained in cleaning agents and following instructions for their safe use and storage.
8. Providing training on bloodborne pathogens and procedures for handling needles or body fluids found in hotel rooms.



What are general best practices for safe working space?

1. Follow or establish safety procedures for working individually.
2. Following or establishing rules for working in a group in the event of an emergency.
3. Having up-to-date training in chemical, biological hazards and Safety Data Sheets.
4. Knowledge of the basic principles of emergency first aid.
5. Compliance with company safety rules.
6. Knowledge of hazard reporting rules.
7. Following 'good' cleaning procedures.



Before using a product, it's crucial to familiarize oneself with its hazards. Specifically, one should:

1. Read the labels of all products used in the cleaning activities
2. Review the safety data sheet or any employer-supplied documentation pertaining to safe use of the hazardous substance.
3. Ensure the product name on the container matches the name on the sheet.
4. Understand potential hazard.
5. Comprehend instructions for safe use and storage.
6. Know emergency procedures.



The Safety Data Sheet (SDS) serves four main purposes and provides, among the others, information on:

1. Substance or mixture identification: It includes the substance name, product identifier, use, and other identification information.
2. Health hazards: This section covers information on potential health hazards such as toxicity, irritant properties, or possible effects following exposure to the substance

3. Precautionary measures: It provides recommendations for safe handling, storage, emergency procedures, as well as personal protection and environmental precautions.
4. Emergency procedures: It offers instructions on what to do in case of accidents, substance spills, fires, exposure, and other emergency situations.

The above list doesn't contain a full content of SDS chapters

Anyone working with hazardous substances should always:

- Read the name of the chemical substance.
- Know the hazards associated with the substance.
-
- Understand the instructions for safe handling and storage.
- Know what to do in case of exposure or an emergency.
- Keep SDS 's of all materials used – they should be easily available for you staff and in case of epidemiological inquiry

5.3. CROSS CONTAMINATION



Choosing the right cleaning process is key in maintaining the facility's cleanliness while ensuring the cleaning team's efficiency. Here are some suggestions and tips to help protect staff from contamination and create the most efficient working system possible.

- Start with the dirtiest areas.
- Most time should be spent cleaning the areas that are most prone to germs and bacteria.

It is recommended to clean in the following order:

1. Kitchen.
2. Bathroom.
3. Bedroom.
4. Common spaces (e.g., Living room, dining room,).
5. Hallway.



Once the room has been cleaned and decontaminated, close the door and disinfect the door handle. You should also leave a message that the room is cleaned, this is also an indication to other members of the cleaning team that the room has been completed. Do not re-enter this space after disinfection. Replace protective equipment every time between cleaning and disinfection, remember to replace gloves and any equipment that may have been contaminated.

The cleaning and disinfection process should be completed at the entrance to the room or premises, the last stage of the cleaning process, i.e., cleaning and disinfection of the internal and external spaces immediately at the entrance means that the room can be left and closed safely.

5.4. ROOM DISINFECTION/DECONTAMINATION



Cleaning

This is a process that seeks to eliminate as many dirt, dust including micro-organisms as possible on surfaces and everyday objects. The process is carried out using common cleaning agents



Disinfection

The process, which through its influence on structure or metabolism, leads to the killing of vegetative bacteria, fungi, and the inactivation of viruses on inanimate surfaces (some agents also possess sporicidal properties).

FIVE-STEP CLEANING PROCESS



1. **Preparation** - of equipment and the space to be cleaned
2. **Cleaning** - surfaces in the room.
3. **Disinfection** - of all areas requiring frequent touching.
4. **Inspection** - to ensure the space has been thoroughly cleaned and disinfected.
5. **Servicing** - the room for the next guest and replenishing supplies.

Preparation - of equipment and the space to be cleaned

- Preparation**
- Cleaning
- Disinfection
- Inspection
- Servicing



Prepare cleaning agents recommended and endorsed by local regulatory authorities such as the Environmental Protection Department and/or Sanitary authority, Occupational and Safety Authority.



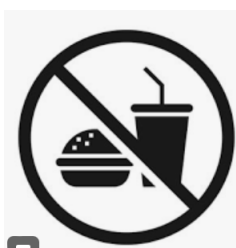
Familiarize yourself with guidelines for the safe use of chemicals. Always read labels on chemical products being used to understand their active ingredients, proper usage, hazards, safe disposal and first-aid. More information on reading product labels and their safety data sheets can be obtained during Occupational Health and Safety training.



Wash hands for at least 20 seconds with soap and water. If not possible, use a hand sanitizer (e.g., containing at least 60% alcohol)



Wear personal protective equipment (PPE) such as disposable gloves, aprons or coveralls, safety goggles and respiratory protection before entering the room. Always wear protective equipment if possible.



Do not eat, drink, chew gum, or apply cosmetics in areas where chemicals are being used.



Long hair, loose clothing, and jewellery should always be secured.



To increase air circulation and ventilate of the room open the windows and/or turn-on air-removing ventilation if present. Do not turn on any blow-in ventilation or open doors to avoid spreading potential hazards throughout the vicinity.

Cleaning - surfaces in the room.

- Preparation
- Cleaning**
- Disinfection
- Inspection
- Servicing



Start cleaning by emptying trash bins and disposing of waste. This step prevents recontaminating surfaces with trash immediately after cleaning them.



Avoid shaking dirty linens, as this can increase the spread of germs.



Vacuum the room. Begin vacuuming from the top down to ensure there are no visible traces of dirt.



Clean and tidy hard surfaces (countertops, tables, sinks, cabinets, and floors). Wipe each surface to remove dirt and dust. When mopping floors, work from the farthest corner of the room towards the exit. Cleaning is the first and most crucial step in the disinfection process.



Clean soft surfaces (carpets, bedding, curtains, upholstery, etc.). First, remove any visible dirt, then clean them with appropriate cleaners designed for these surfaces. If possible, wash items in a washing machine according to the manufacturer's instructions.

Disinfection - of all areas requiring frequent touching.

Preparation
Cleaning
Disinfection
Inspection
Servicing



After cleaning

hard surfaces, spray them with a disinfectant. Focus on disinfecting all frequently touched surfaces such as door handles and light switches, as well as surfaces that may have come into contact with dirty linens. Remember to disinfect electronic equipment according to the manufacturer's instructions.



Leave the disinfectant on for the time specified by the manufacturer. The product label will specify the wet contact time needed to effectively disinfect the surface. This allows the chemical compounds to kill as many germs as possible.

Inspection - to ensure the space has been thoroughly cleaned and disinfected.

Preparation
Cleaning
Disinfection
Inspection
Servicing



Familiarize yourself with the cleaning and disinfection guidelines for each specific room.



Develop a checklist for the room, detailing the order and elements requiring daily cleaning.



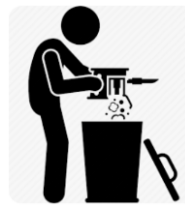
Thoroughly inspect to ensure all surfaces have been disinfected.
Correct anything that may have been missed.

Servicing - the room for the next guest and replenishing supplies.

Preparation
Cleaning
Disinfection
Inspection
Servicing



Dispose of single-use items such as disinfecting wipes and paper towels. If using cleaning cloths, wash them at the highest appropriate temperature for the material.



After each cleaning session, empty and disinfect the vacuum cleaner. Also, disinfect any other cleaning tools that were used.



Safely remove personal protective equipment (PPE) after cleaning. Dispose of or wash the PPE according to the guidelines for its use.



Wash your hands for at least 20 seconds with soap and water. If this is not possible, use a hand sanitizer containing at least 60% alcohol.



Prepare for the next tasks. Replenish cleaning supplies. Take a moment to check expiration dates and restock used materials.



Cleaning procedure

The following guidelines can be implemented as a standard. However, the procedures to be used must be validated depending on the type of contagious disease. A person in charge of sanitary issues should contact the country’s health services. **CLEANING SERVICE**

All cleaning staff should be informed and trained about the hazards and the procedures in place. Cleaning of areas not exposed to pathogens should be carried out in a standard manner.

The number of cleaning staff should be appropriate to the ability to clean contaminated surfaces efficiently in the shortest possible time. The persons in contact with the in the supply chain, food preparation, and serving should never be designated to rooms/area cleaning tasks. .

DEEP CLEANING Procedures

| Deep cleaning: bedroom |
|---|
| Strip bed of linen- vacuum mattress — replace with clean under blanket- remake bed |
| Clean windows using alcohol-based fluid — removing mould and dead fly’s — wipe clean windowsill |
| Pull out furniture —vacuum and dust behind items — replace furniture Vacuum carpet edges Vacuum chairs and sofas Vacuum or dust lamp shades |
| Wash or dust skirting boards- to remove black marks Dust tops of pictures and mirrors |
| Move and dust underneath and behind televisions |
| Wash bedroom bin inside and outside |
| Vacuum bedroom curtains Dust or wash bedroom furniture to remove marks and dust Dust top of wardrobe Wash doors and door frames |

| Deep cleaning: bathroom |
|--|
| Take down the shower curtain and replace it at the end of cleaning with a clean one. |
| Spray bathroom walls around the bath with a germicide/antiviral fluid. The hotel/chain should define one or set the minimum requirements such a fluid meets. Allow the chemical to work for several minutes, depending on the fluid type, then scrub tiles using the green side of the sponge and use a brush to clean grouting to remove mould. |
| Rinse walls with clean water and dry with a cloth. Wipe other walls with a damp cloth |

to remove dust. Vacuum or use a dust extractor fan. Wash shelving.

Wipe down all chrome fittings. Wipe light fittings. Wash the bin inside and out.

Wipe toiletries stand.

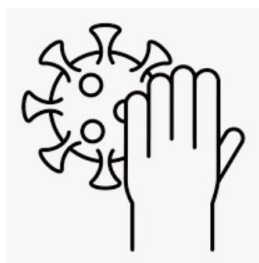
Vacuum and wash the bathroom floor — including behind the door, toilet, under the bin, and inside the corners.

| Sanitary precautions during deep cleaning | |
|---|--|
| Deep cleaning Orange | Use germicide, a dust mask, gloves, apron. Dispose the PPE of after cleaning each room |
| Deep clean Red | Use Filtering Face Piece, nitrile gloves, apron. Replace and bag the PPE items after cleaning, and mark for disposal. Shower after finishing each red-marked room. |

5.5. PREVENTING AN OUTBREAK

The following information should be discussed with the Cleaning Team before implementing the cleaning procedures.

The biggest risk facing the hotel during an outbreak is the interaction between infected and non-infected persons. Precautions to segregate guests and team Members if they have reported symptoms should be given a high priority, as should cleaning of affected areas.



While it is not possible to prevent an outbreak from occurring at your hotel under all circumstances, the following precautions will help to reduce the likelihood of an outbreak becoming established:

1. Vigilant monitoring of guests’ complaints.
2. Vigilant monitoring of vomiting and diarrhoea incidents in the hotel – staff and housekeeper to report all incidents including soiling of bedrooms.
3. Early identification of the signs of an outbreak.
4. Staff training and awareness of their role.

5. Staff training regarding the importance of not reporting for work if suffering from sickness or diarrhoea (until 48 hours after symptoms have cleared). NB applies to all staff, not just food handlers.
6. Thorough routine cleaning procedures for hand contact surfaces such as taps, toilet handles etc.

PRECAUTIONARY PROCEDURES & PREPARATION

The hotel should be prepared for a viral outbreak. This involves having a trained ‘Cleaning Team’ established in the hotel at all times, as well as having a supply of equipment, chemicals and PPE available in case of a viral outbreak.

The following rules should be standard in all hotels, although state institutions responsible for epidemiological safety should be consulted to determine the amount of certain measures, as they will be specific to the hotel and the type of hazard.



Cleaning team

A ‘**cleaning team**’ should be assembled and briefed on the current situation. Normal cleaning of unaffected areas should be carried out in the normal manner.

The cleaning team should comprise of enough individuals to clean affected rooms and areas, ideally from housekeeping and/or maintenance. The cleaning team should not include any food handlers.



Training

Before commencing duties, the cleaning team (or any team member who could potentially be part of the cleaning team) must have received appropriate training in viral outbreak management and the use of equipment and chemicals. They should be competent to carry out their duties in the event of an outbreak and should be fully familiar with the procedures to avoid life and health-threatening situations.



DUTIES

The duties of the nominated cleaning team are:

1. Decontamination of the areas required by the Outbreak Coordinator.
2. Public Facilities – to be cleaned on demand and a minimum of four times daily in the early stages of an outbreak.
3. Public Toilets to be cleaned every hour.
4. Clean up vomit in public areas/ facilities on demand.



EQUIPMENT

The following equipment should be held on-site at all times:

1. Yellow Biohazard Waste Disposal Bag.
2. Soluble laundry bags.
3. Mop buckets for contaminated toilets. These can be ‘cheap’ disposable buckets as they will need to be disposed of after the outbreak (consider having a stock of these if there is not a shop supplying these near the hotel).
4. Disposable mop heads for contaminated toilets (as above).
5. Disposable cloths for contaminated areas.
6. Antibacterial Hand Gel Dispensers (preferably wall mounted).



CHEMICALS

The following chemicals should be held on site at all times:

1. Disinfectant spray bottles: There should be a supply of 6 spray bottles per 30 rooms on site. Larger hotels may use dispensing systems).
2. Body fluid spill kit containing chlorine-based disinfectant.
3. Antibacterial Hand gel.
4. Chlorine-based disinfectant powder.



PPE

The following Personal Protective Equipment (PPE) should be on site at all times:

1. Disposable non-latex, non-powdered gloves.
2. Disposable plastic aprons.
3. PVC overshoes
4. FFP-3 filtering facelets
5. Safety glasses



Body fluids management

Recommended management of spilled body fluids:

1. Remove people from the immediate area.
2. Place a "caution cleaning" warning sign.
3. Put on necessary personal protective equipment.
4. Cover body fluids and organic parts with disposable paper towels to absorb excess fluids collect and place in a double bag:
 - Sprinkle the disinfectant over the contaminant and leave for the time recommended by the manufacturer, but not longer than 15 minutes. Remove with a disposable towel or a sheet of lignin, treating the material as hazardous medical waste and place in a bag for hazardous medical waste.
 - The contaminated area should be covered with hygroscopic disposable material, e.g., a sheet of lignin or disposable towel, and the whole area should be flooded with the prepared disinfectant, for a maximum exposure time of 15 minutes, without allowing the surface to dry out. The material covering whole area should be collected, treated as hazardous material and placed in a bag for hazardous medical waste
 - immediately after contamination, remove the hazardous material with hygroscopic disposable material, e.g., disposable towel, lignin sheet and place in a medical waste bag.
5. Wash the surfaces with detergent and hot water using disposable tools and dry thoroughly,
6. Place personal protective equipment in a medical waste bag - double bag it- secure bags with adhesive tape.
7. Disinfect hands, wash and disinfect again.
8. Yellow medical bags could be collected only by approved companies/services and destroyed in allowed medical waste destruction facilities.

If there is a risk of secondary infection of cleaning service members, quarantine the exposed persons in accordance with the recommendations of the competent services.

ROOM DECONTAMINATION PROCEDURE



Procedure for decontamination of a room that has been occupied by affected guests or team members (after check-out) as the room should not be entered while the guest is still in the hotel.

1. Put on PPE
2. Open the window to allow fresh air
3. Strip bed, place all linen and pillowcases in soluble linen bags and seal the bags. Any soiled items such as pillows or duvets should be laundered or preferably disposed of.
4. Remove shower curtain (if material) and bath mat, place in soluble linen bags and seal for laundering.
5. Discard all disposable items e.g., menus, toiletries, toilet roll etc., and seal in bin bags.
6. Use the Ozone Machine in the bedroom for one cycle if available.
7. **Consider steam cleaning** of fabrics – contact Safety and Security Department for advice. This may depend on the scale of the outbreak and the availability of the equipment.
8. All crockery and glassware should be rewashed with a dishwasher designated for sanitization.
9. Decontaminate all hard surfaces i.e., chair and table legs, window frames, dressing tables, bedside tables, inside drawers, wardrobes, and headboards with appropriate sanitizer for the particular material.
10. Ensure the mini bar is cleaned i.e., remove items and clean with the sanitizer.
11. Decontaminate all areas within the bathroom such as the air vents, inside surface of taps, shower heads, handles, towel rails, waste bins and around the cistern of the toilet using a disposable cloth and sanitizer.
12. Mop the bathroom with a disposable mop and bucket (preferably colour coded).
13. The bathroom should be cleaned as for normal changeover.
14. Remove safely your PPE
15. All cloths, gloves, PVC overshoe and aprons should be placed in yellow clinical waste bags after use in each room, sealed and disposed of.
16. Once the room has been aired for **24** hours the room can be made up for a normal change over.

CLEANING PROCEDURE FOR HOTEL



All hand contact surfaces in Front of House and Back of House need to be cleaned **EVERY 2 HOURS**.

1. Door handles and door plates
2. Stair banisters
3. Reception desks and pens
4. Public computers and public telephones
5. Electrical switches
6. Toilet flushers, taps, door handles and door plates, hand dryers, toilet paper holders and toilets brush handles
7. Keys on check out day. List all the areas in the hotel that will need cleaning e.g., reception, staff changing rooms, back of house corridors. Ensure these areas are cleaned every 2 hours.
8. Toilet cleaning procedure - all public and staff toilets should be cleaned every hour using the normal procedure plus sanitizer should be used on all hand contact surfaces. The Cleaning Schedule – Toilets can be used to record the hourly cleaning of toilets.

5.6. Personal Protective Equipment (PPE) recommendations

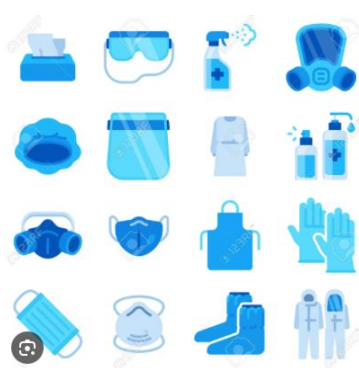
This manual is designed to provide recommendations about Personal Protective Equipment (PPE) and its importance in maintaining safety and hygiene standards in the cleaning industry. PPE is crucial for protecting employees from potential hazards and ensuring a safe working environment. This introduction will give you an overview of the different types of PPE, their proper use, and the best practices for maintaining and storing this equipment.

PPE

Importance of PPE in Cleaning Services

Cleaning services often involve exposure to various chemicals, contaminants, and physical hazards. PPE serves as the first line of defence against these risks, helping to prevent injuries and illnesses. Proper use of PPE at a level required by CBRN hazards not only safeguards the health of cleaning personnel but also ensures compliance with occupational safety regulations. It also promotes a professional and reliable service to clients.

Both managers and staff have to remember that OSH requirements are set well below what CBRN requires, and the authors of this manual should somehow highlight that fact as not every manager may be aware of it



Types of PPE

In the cleaning industry, common types of PPE include:

- **Gloves:** Protect hands from chemicals, infectious agents, and abrasive surfaces.
- **Masks and Respirators:** Prevent inhalation of harmful dust, fumes, and pathogens.
- **Goggles and Face Shields:** Shield eyes and face from splashes, debris, and harmful substances.
- **Protective Clothing:** Includes aprons, gowns, and coveralls to protect the body from spills and contamination.
- **Footwear:** Non-slip, waterproof shoes or boots to prevent slips and protect feet from chemicals and sharp objects, disposable shoe covers.



Proper Use of PPE

To ensure optimum protection, PPE must be used correctly. This includes:

- **Selecting the Right Equipment:** Choose PPE that is suitable for the specific tasks and hazards.
- **Correct Fit and Comfort:** Ensure PPE fits properly and is comfortable to wear for extended periods.
- **Routine Inspections:** Regularly check PPE for signs of damage or wear and replace as necessary.
- **Proper Donning and Doffing:** Follow the correct procedures for putting on and taking off PPE to avoid contamination.



Maintenance and Storage

Proper maintenance and storage of PPE are vital to its effectiveness. This involves:

- **Cleaning and Disinfecting:** Clean reusable PPE according to manufacturer instructions to maintain hygiene and effectiveness.
- **Storage:** Store PPE in a clean, dry, and accessible location to prevent damage and contamination.
- **Training and Awareness:** Regular training sessions to ensure all staff are knowledgeable about PPE use, maintenance, and emergency procedures.

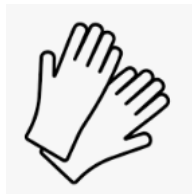
By adhering to these guidelines, you can create a safer working environment, reduce the risk of accidents, and enhance the overall quality of our cleaning services. Thank you for your commitment to safety and excellence. Let's work together to maintain a healthy and protected workplace.

Types of PPE

Gloves

Masks and Respirators
 Goggles and Face Shields
 Protective Clothing
 Footwear

Gloves



Protective gloves are an essential element of PPE in the cleaning industry. They play a critical role in safeguarding workers' hands from exposure to hazardous substances, including chemicals, infectious agents, and abrasive materials. The importance of protective gloves has been particularly highlighted during health outbreaks, such as the COVID-19 pandemic, where the need for stringent hygiene and protection measures has become more apparent than ever.

Types of Protective Gloves

Different tasks and hazards in cleaning services require specific types of protective gloves. Here are the most common types:

Disposable Gloves

- **Material:** Typically made from latex, nitrile, or vinyl.
- **Uses:** Ideal for tasks requiring frequent glove changes, such as handling cleaning chemicals or dealing with potentially infectious materials.
- **Advantages:** Single-use, reducing the risk of cross contamination, and providing a snug fit for enhanced dexterity.
- **Recommendation:** nitrile rubber or vinyl. Avoid latex as not offering protection against chemical and biological agents. Consider to double-the gloves if better protection is required.

Chemical-Resistant Gloves

- **Material:** Made from materials like butyl or neoprene.
- **Uses:** Suitable for handling strong cleaning agents and solvents.
- **Advantages:** Resistant to a wide range of chemicals, providing superior protection against organic chemicals.

Disadvantage: thick and not good for precise operations. In case of short exposure time may be replaced by double layer of nitrile gloves,

Cut and Needle Resistant Gloves

- **Material:** Constructed from materials such as Kevlar or stainless-steel mesh.



- **Uses:** Used in tasks where there is a risk of cuts or punctures from sharp objects, needles or abrasive surfaces.
- **Advantages:**
Offer high levels of protection against physical injuries, ensuring safe handling of sharp materials.
- **Disadvantage:** Doesn't protect against biological or chemical agents

Types of PPE

Gloves

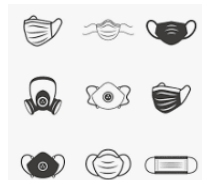
Masks and Respirators

Goggles and Face Shields

Protective Clothing

Footwear

Masks and Respirators



Respiratory Protection: A Key Component of PPE in Cleaning Services

Respiratory protection is a vital part of PPE in the cleaning industry. It is essential for safeguarding workers from inhaling harmful particles, chemicals, and pathogens. The importance of respiratory protection has been particularly emphasized during health outbreaks, such as the COVID-19 pandemic, where preventing airborne transmission of viruses became a critical concern.

Types of Respiratory Protection

Different tasks and hazards in cleaning services require specific types of respiratory protection. Here are the most common types:

Disposable Masks

- **Material:** Usually made from non-woven fabric.
- **Uses:** Ideal for short-term use, such as protecting against particulate matter e.g., dust, pollen, solid and liquid aerosols.
- **Advantages:** Lightweight, easy to use, and provide basic protection against airborne particles.

Surgical Masks

- **Material:** Typically made from a multi-layer fabric that includes a moisture-resistant outer layer.
- **Uses:** Designed to protect against large droplets, splashes, and sprays that may contain viruses or bacteria.
- **Advantages:** Widely used in healthcare settings; also useful for cleaning tasks involving potential exposure to bodily fluids.

- **Material:** Made from electrostatically charged fibres.
- **Uses:** Suitable for protecting against airborne particles, including

dust,
fumes,
and
pathog
ens.

- **Advantages:** Provides a high level of filtration efficiency.
- **N95/FFP2** at least 95% of airborne particles.
- **N99/FFP3** at least 99% of airborne particles.
- **Important:** fits tightly to the face to minimize leakage.
- **Recommendation: N99/FFP3**

Reusable Respirators

- **Material:** Typically made from silicone or rubber with replaceable filter cartridges.
- **Uses:** Ideal for tasks involving prolonged exposure to hazardous chemicals, fumes, or particulates.
- **Advantages:** Long-lasting and cost-effective; customizable with different filters for specific hazards.

Powered Air-Purifying Respirators

- **Material:** Consists of a hood or helmet, a breathing tube, and a power unit that includes a blower and filters.
- **Uses:** Designed for high-risk environments where maximum protection is required and for higher comfort of the user.
- **Advantages:** More comfortable for extended use as it reduces breathing resistance.
- Recommended only for professional use, like disinfection or disinfestation services.

Choosing the right type of respiratory protection is crucial for ensuring the safety and health of cleaning personnel. By understanding the specific requirements of each task and the associated respiratory hazards, we can equip our staff with the appropriate protective equipment to maintain high standards of hygiene and safety. Proper training on the correct use, maintenance, and disposal of respiratory PPE is also essential for maximizing its effectiveness.



Types of PPE

Gloves
 Masks and Respirators
Goggles and Face Shields
 Protective Clothing
 Footwear

Eye Protection



Eye protection is an essential part of Personal Protective Equipment in the cleaning. It is crucial for protecting workers from potential eye injuries caused by chemical splashes, flying debris, and other hazards. The importance of eye protection has been particularly underscored during health outbreaks, such as the COVID-19 pandemic, where the risk of infection through mucous membranes, including the eyes, highlighted the need for comprehensive protective measures.

Types of Eye Protection

Different tasks and hazards in cleaning services require specific types of eye protection. Here are the most common types:

Safety Glasses

- **Material:** Usually made from polycarbonate or other impact-resistant materials.
- **Uses:** Ideal for general protection against flying particles, dust, and minor chemical splashes.
- **Advantages:** Lightweight, comfortable, and provide basic impact resistance; available in various styles to fit different face shapes.

Goggles

- **Material:** Made from flexible, impact-resistant materials with a snug-fitting seal around the eyes.
- **Uses:** Suitable for tasks involving exposure to liquid splashes, chemical vapours, and fine dust particles.
- **Advantages:** Provide a secure fit to prevent contaminants from reaching the eyes. Available in vented and non-vented styles for different levels of protection.

Face Shields

- **Material:** Typically constructed from clear polycarbonate or acetate.



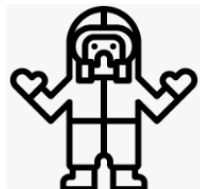
- **Uses:** Used in combination with safety glasses or goggles for full-face protection against splashes, sprays, and flying debris.
- **Advantages:** Offers extensive coverage for the face and neck; adjustable headgear ensures a comfortable fit; does not fog up as easily as goggles.

Choosing the right type of eye protection is crucial for ensuring the safety and health of cleaning personnel. By understanding the specific requirements of each task and the associated eye hazards, we can equip our staff with the appropriate protective equipment to maintain high standards of safety and hygiene. Proper training on the correct use, maintenance, and storage of eye PPE is also essential for maximizing its effectiveness and ensuring long-term protection.

Types of PPE

- Gloves
- Masks and Respirators
- Goggles and Face Shields
- Protective Clothing**
- Footwear

Protective Clothing



Choosing the right type of protective clothing is crucial for ensuring the safety and health of cleaning personnel. By understanding the specific requirements of each task and the associated hazards, we can equip our staff with the appropriate protective gear to maintain high standards of hygiene and safety. Proper training on the correct use, maintenance, and disposal of protective clothing is also essential for maximizing its effectiveness and ensuring long-term protection

Types of Protective Clothing

Different tasks and hazards in cleaning services require specific types of protective clothing. Here are the most common types:

Coveralls

- **Material:** Typically made from lightweight, breathable fabrics such as polyethylene, e.g., Tyvek or polypropylene.
- **Uses:** Ideal for tasks involving exposure to dust, dirt, and light inorganic chemical splashes.
- **Advantages:** Full-body coverage to prevent contamination of personal clothing, disposable and reusable options available.

Aprons

- **Material:** Made from materials like PVC, rubber, or polyethylene.

- **Uses:** Suitable for protecting against liquid splashes and spills, particularly when handling cleaning agents.

- **Advantage:** Easy to put on and take

off; provides excellent protection for the front of the body.

Gowns

- **Material:** Usually constructed from non-woven fabrics or fluid-resistant materials.
- **Uses:** Commonly used in healthcare and cleaning tasks involving contact with bodily fluids or infectious materials.
- **Advantages:** Offers high levels of fluid resistance; often includes features like elastic cuffs and waist ties for a secure fit.

Types of PPE

- Gloves
- Masks and Respirators
- Goggles and Face Shields
- Protective Clothing
- Footwear

Protective Footwear



Protective footwear is an essential part of Personal Protective Equipment in the hotel cleaning tasks. It is crucial for protecting workers from various hazards, including slips, trips, falls, and exposure to harmful substances such as chemicals, viruses, bacteria, and other pathogens. The importance of protective footwear has been particularly highlighted during health outbreaks, such as the COVID-19 pandemic, where ensuring the safety and hygiene of cleaning staff has become paramount in preventing the spread of infections.

Types of Protective Footwear

Different tasks and hazards in hotel cleaning services require specific types of protective footwear. Here are the most common types:

Non-Slip Shoes

- **Material:** Typically made from rubber or other slip-resistant materials.
- **Uses:** Ideal for preventing slips and falls on wet or greasy surfaces, which are common in hotel environments.

- **Advantages:** E

enhanced grip and stability; essential for maintaining safety in areas such as kitchens, bathrooms, and lobbies where spills are likely.

Waterproof Shoes

- **Material:** Made from waterproof materials such as PVC, rubber, or treated leather.
- **Uses:** Suitable for tasks involving exposure to water, cleaning solutions, and other liquids.
- **Advantages:** Keeps feet dry and protected from liquid splashes; easy to clean and disinfect, reducing the risk of contamination.

Chemical-Resistant Boots

- **Material:** Made from materials that resist chemical degradation, such as PVC or nitrile.
- **Uses:** Ideal for environments where workers are exposed to cleaning chemicals and disinfectants.
- **Advantages:** Protects feet from chemical spills and splashes; durable and resistant to a variety of cleaning agents.

Closed-Toe Shoes

- **Material:** Typically made from leather, synthetic materials, or treated fabrics.
- **Uses:** Provides basic protection against minor spills and physical injuries.
- **Advantages:** Shields feet from accidental splashes of cleaning solutions and minor physical impacts; comfortable for extended wear.

Disposable Shoe Covers

- **Material:** Made from lightweight, waterproof materials such as polypropylene or polyethylene.
- **Uses:** Ideal for use in highly contaminated areas or when additional hygiene measures are necessary.
- **Advantages:** Provides an additional layer of protection by covering existing footwear, helps prevent the spread of pathogens and contaminants from one area to another, easy to put on and dispose of, ensuring high hygiene standards.
- **Disadvantage:** shoe covers may be slippery, floor surface contact is susceptible to damage, potentially causing liquid leaks, adding extra components to PPE complicates the process of putting on and taking off the equipment (donning and doffing).

Choosing the right type of protective footwear is crucial for ensuring the safety and



health of hotel cleaning personnel and cross contamination. By understanding the specific requirements of each task and the associated hazards, especially in environments with high risks of viral and bacterial contamination, you can equip your staff with the appropriate footwear to maintain high standards of hygiene and safety. Proper training on the correct use, maintenance, and inspection of protective footwear is also essential for maximizing its effectiveness and ensuring long-term protection. Disposable shoe covers provide an additional layer of protection, particularly in situations requiring stringent hygiene protocols, further enhancing the safety of both staff and guests.

Attention: Please keep in mind that used PPE could be a source for secondary contamination. Keep it well packed in an appropriate bag (i.e., in yellow medical waste bag if biological threat is possible).

6. Annexes

- Annex A - Detailed cleaning guideline
- Annex B - Meaning of chemical pictograms

Annex A: DETAILED CLEANING GUIDELINE

- A – All situations
- N – NO RISK
- O – at orange level
- R – at red level

| Planning CBRN cleaning | |
|---|---|
| Actions | Comments |
| Have the procedure for declaring risk status at every level other than NO RISK | Hotel manager sanitary/ person in charge of sanitary matters in consultation with the general manager |
| Prepare cleaning instructions depending on the assessed CBRN (epidemiological in practice) risk | |
| Have the initial CBRN risk assessed | <p>Criteria and levels</p> <p>NO RISK if nothing reported</p> <p>ORANGE RISK if: (i) existing likelihood of C/B/R contamination, (ii) an area-specific warning by sanitary authority, (ii) any warning from inside the chain or industry; (iii) accumulated reports from the hotel staff or gathered evidence</p> <p>RED RISK: (i) a declared state of epidemics or contamination in the area (ii) existing reports and recommendations from the chain managers/coordinators (iii) repeated evidence from inside assessed as a possible biothreat</p> |
| Announce it to the staff e.g., through colour-coding | |

| Rooms | |
|---|--|
| It is recommended to put your dust/surgical/ FFP mask on (A) | Put your FFP mask on (O,R) |
| Ensure all unused lights and air conditioning are switched off;(A) | |
| Treat any large spills, excretions of body fluids using regular procedures | In case of any large spills, excretions of body fluids treat them as biohazard etc. (R) |
| Ensure the curtains are opened and the room is ventilated;(A) | Ensure curtains are opened, and the room is ventilated through the window or exhaust AC (O, R) |
| Empty and damp-wipe ashtrays; (N) | Empty and damp-wipe ashtrays; place the content in the marked trash bag (O,R) |
| Remove rubbish from rubbish bins and dispose it off correctly, damp wipe bins(N); | Remove rubbish from rubbish bins and dispose it correctly to the marked trash bag, and damp-wipe the bins. If the bin contains bodily fluids, or other suspicious organic matter, make an appropriate note on the cleaning checklist, the sanitary manager shall decide about application of a professional disinfection procedure; (O, R) |
| Wash and dry cups and glasses;(N) | Collect dirty crockery and glassware for dishwashing (O,R) |
| Wipe down all surfaces and items, such as ice tray, kettle, and drawers;(N) | Use deep cleaning procedure, (O,R) |
| Systematically damp-dust bedroom, starting at the main door and working around room, including drawers; (N) | Use deep cleaning procedure (O, R) |
| Replenish guest supplies and advertising literature;(N) | If the room may be qualified for deep cleaning skip that step, mark the fact on the checklist (O, R) Room may be qualified for disinfection |
| Straighten lampshades and pictures;(A) | |
| Ensure curtains are in place and furniture in position; (A) | |
| Vacuum carpet and soft furnishings, ensuring furniture is moved in order to vacuum all areas, including corners and edges;(N) | Plan your cleaning so you don't cross the path you already cleaned to avoid possible cross-contamination |
| Vacuum corridor carpet, outside doors;(A) | |

| | |
|--|--|
| Remove all soiled linen from bed and bathroom;(N) | Remove all soiled linen from bed and bathroom Put soiled linen in a bag marked with the room number they originate from. Avoid deep breathing when handling bed and bathroom linen |
| Check bedspreads, blankets, bed pads and inner slips for soiling and replace if necessary; | Handle soiled items with caution. If any surfaces/items are soiled, record that fact on the checklist and bag all soiled items in a bag marked with a room number they originate from. |
| Make up beds using fresh linen. (N) | Follow or ask for the specific instructions from the manager (O,R) |
| Bathrooms | |
| Use standard procedure (N) | Use deep cleaning procedure (O, R) |
| Corridors | |
| Vacuum corridors outside rooms, dust skirting and pictures;(A) | |
| Replenish trolleys for the following day (A) | |

ANNEX B: Meaning of chemical pictograms ⁵

Pictogram

Usage



- Unstable explosives
- Explosives, divisions 1.1, 1.2, 1.3, 1.4, 1.5, 1.6
- Self-reactive substances and mixtures, types A, B
- Organic peroxides, types A, B

Further information: [Explosive material](#)

e.g. [azidoazide azide](#), [TNT](#), [chromyl chloride](#), [nitroglycerin](#)

GHS01: Explosive



- Flammable gases, category 1
- Flammable aerosols, categories 1, 2
- Flammable liquids, categories 1, 2, 3, 4
- Flammable solids, categories 1, 2
- Self-reactive substances and mixtures, types B, C, D, E, F
- Pyrophoric liquids, category 1
- Pyrophoric solids, category 1
- Combustible solids, category 3
- Combustible liquids, category 3
- Self-heating substances and mixtures, categories 1, 2
- Substances and mixtures, which in contact with water, emit flammable gases, categories 1, 2, 3
- Organic peroxides, types B, C, D, E, F

GHS02: Flammable

Further information: [Flammability](#)

e.g., [acetone](#), [methanol](#), generally most solvents.



- Oxidizing gases, category 1
- Oxidizing liquids, categories 1, 2, 3
- Oxidizing solids, categories 1, 2, 3

Further information: [Oxidizing agent](#)

e.g. [hydrogen peroxide](#), most [halogens](#), [potassium permanganate](#), [nitric acid](#)

GHS03: Oxidizing

⁵ https://en.wikipedia.org/wiki/GHS_hazard_pictograms (access: 20.08.2024)



GHS04: Compressed Gas

- [Compressed gases](#)
- [Liquefied gases](#)
- [Refrigerated liquefied gases](#)
- [Dissolved gases](#)
- e.g. [liquid nitrogen](#), [liquid oxygen](#), [liquid helium](#)



GHS05: Corrosive

- Corrosive to metals, category 1
- Further information: [Corrosive substance](#)
 Strong acids/bases ([nitric acid](#), [sodium hydroxide](#)), [calcium oxide](#), [anhydrous zinc chloride](#) can be corrosive

no pictogram required

- Explosives, divisions 1.5, 1.6
- Flammable gases, category 2
- Self-reactive substances and mixtures, type G (see [HAZMAT Class 4 Flammable solids](#))
- [Organic peroxides](#), type G

7. Health hazards pictograms

Pictogram

Usage



GHS06: Toxic

- Acute toxicity (oral, dermal, inhalation), categories 1, 2, 3
- e.g., [manganese heptoxide](#) ([fire diamond](#) rating at health hazard is 4)



- Acute toxicity (oral, dermal, inhalation), category 4
- Skin irritation, categories 2, 3
- Eye irritation, category 2A
- Skin sensitization, category 1
- Specific target organ toxicity following single exposure, category 3

- Respiratory tract irritation
- Narcotic effects

GHS07:
Health Hazard/Hazardous to Ozone Layer



GHS08: Serious Health hazard

no pictogram required

Not used^[3]

- with the "skull and crossbones" pictogram
- for skin or eye irritation if:
 - the "corrosion" pictogram also appears
 - the "health hazard" pictogram is used to indicate respiratory sensitization
- Respiratory sensitization, category 1
- [Germ cell](#) mutagenicity, categories 1A, 1B, 2
- Carcinogenicity, categories 1A, 1B, 2
- Reproductive toxicity, categories 1A, 1B, 2
- Specific target organ toxicity following single exposure, categories 1, 2
- Specific target organ toxicity following repeated exposure, categories 1, 2
- Aspiration hazard, categories 1, 2
- e.g., [chromium](#)
- Acute toxicity (oral, dermal, inhalation), category 5
- Eye irritation, category 2B
- Reproductive toxicity – effects on or via lactation

8. Physical and health hazard pictograms

Further information: [Corrosive substance](#)

Pictogram

Usage



GHS05: Corrosive

- Explosives, divisions 1.5, 1.6
- Flammable gases, category 2
- Self-reactive substances and mixtures, type G (see [HAZMAT Class 4 Flammable solids](#))
- [Organic peroxides](#), type G
- Skin corrosion, categories 1A, 1B, 1C
- Serious eye damage, category 1

9. Environmental hazards pictograms

Pictogram



GHS09: Hazardous to the Environment

Usage

- Acute hazards to the aquatic environment, category 1
 - Chronic hazards to the aquatic environment, categories 1, 2
 - Environmental toxicity, categories 1, 2
-
- Acute hazards to the aquatic environment, categories 2, 3
 - Chronic hazards to the aquatic environment, categories 3, 4