

# Enhancing Environmental Cleaning and Disinfection for Hotels under the COVID-19 Pandemic

Infection Control Branch  
Centre for Health Protection  
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# Content

- Risk of transmission of COVID-19
- General infection control and preventive measures
- Special arrangement for guests undergoing compulsory quarantine
- Enhancing hotel environmental cleaning and disinfection
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- Waste management
- Environmental cleaning and disinfection when a suspected or confirmed case of COVID-19 is encountered
- Preventive and control measures: Hand hygiene and proper use of PPE



# Risk of transmission of COVID-19

- **Mode of transmission**

- **Droplets**

- through respiratory droplets when the infected person cough, sneeze or speak

- **Contact**

**Direct contact: through contact** with infected person's secretion or other body fluid

**Indirect contact: through contact** with environment or objects contaminated by infected person's body fluid

**Proper environmental cleaning and disinfection can effectively minimise the risk of contracting and spreading of COVID-19**

# General infection control and preventive measures



# General infection control and preventive measures

## Hotel guests

- Long-term tenants
- Short-term residents
- Inbound travellers undergoing compulsory quarantine for 14 days
- Inbound travellers who have visited specified high risk places undergoing compulsory quarantine in designated hotels for 14 days in accordance with Cap. 599H



# General infection control and preventive measures

## General advice for residents/ guests

- Observe good personal hygiene, especially on hand hygiene and proper cough manners
- Guest(s) is/are advised to stay in the room if feeling unwell, wear a surgical mask and call the hotel operator at once for arrangement of medical consultation
- If guest(s) developed respiratory symptoms, the hotel should facilitate the guest(s) to seek medical care and advised him/her not to take public transport to help prevent the spread of infection

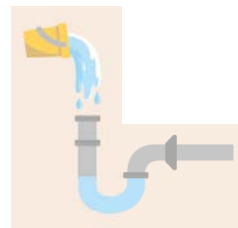


衛生署

Department of Health

# General infection control and preventive measures

- Provide 70-80% alcohol-based handrub in public areas and prepare adequate amount of surgical mask for use
- Enhancing environmental cleaning and disinfection
- Cover porous materials with materials which can be cleaned and disinfected easily as far as possible
- Maintain good ventilation
  - Maximizing fresh air intake (open the windows if feasible)
  - Change and clean the filter of the ventilation system regularly according to manufacturer recommendations
  - Ensure exhaust fans of toilets are in proper function
- Ensure the drainage systems are in proper function
  - Pour about half a litre of water into each drain outlet (U-traps) before admitting new guests and every week



# General infection control and preventive measures

## Hotel staff

- Maintain good personal hygiene and perform hand hygiene frequently
- Staff should wear uniform and surgical mask
- Staff should put on the appropriate Personal Protective Equipment (PPE) based on risk assessment
- Maintain appropriate social distance (i.e. at least 1 metre apart) whenever practicable
- Those with fever or respiratory symptoms or sudden loss of taste/smell should refrain from work, inform supervisors and seek medical advice promptly





# General infection control and preventive measures

## Advice upon check-in at Reception

- Arrange temperature checking for all visitors at hotel entrance and remind all visitors to wear surgical masks
- Triage different categories of guests (if applicable)
- Staff should wear face shield if no effective physical barrier separating them from guests during check-in
- Assign designated staff for guests who are undergoing compulsory quarantine and avoid contact with other guests
- Provide 70-80% alcohol-based handrub to guests and prepare adequate amount of surgical mask for use



# General infection control and preventive measures

## Hotel staff

- Suggest to suspend any mass gathering or social activities
- Catering service
  - ensure there is at least 1.5 metres in between tables
  - Arrange uni-directional seating arrangement to reduce face-to-face encounter
  - Encourage takeaway or meals delivered to guest rooms by hotel staff
- Keep a list of staff and guests and related information to facilitate contact tracing when there is a confirmed case



# Special arrangement for guests undergoing compulsory quarantine



# Special arrangement for guests undergoing compulsory quarantine

## Rooms arrangement

- Allocate guests under compulsory quarantine
  - Same wing on the same floor
  - Single room with toilet
  - Not to share room or toilet with others
- Assign a designated lift for them if feasible, clean and disinfect the lift buttons and touched areas after use
- Keep a list of staff and guests and related information for relevant government department whenever necessary



# Special arrangement for guests undergoing compulsory quarantine

## Provision of supplies

- Provide garbage bags for the guest to wrap their waste for collection
- Make spare linen available within the hotel room or provide linen for replacement upon request
- Provide guests with items for cleaning and disinfection when needed, suggest them to consider to clean and disinfect the room and toilet with 1 in 49 diluted household bleach



# Special arrangement for guests undergoing compulsory quarantine

- **Remind guests under compulsory quarantine**
  - Must not leave the hotel room during the quarantine period without permission by authorized officer
  - Visits to guest(s) staying in hotel for compulsory quarantine should be restricted. For parent / guardian / carer who chooses to stay in the hotel with the guest(s) undergoing compulsory quarantine, they should either (i) stay in a separate room with independent toilet and restrict contact with the guests, or (ii) if staying in the same room, not leave the hotel room for the whole quarantine period in order to avoid potential spread of COVID-19 to the community

# Special arrangement for guests undergoing compulsory quarantine

- **Remind guests under compulsory quarantine**
  - Picking up meals at reception/restaurant and leaving the room is strictly forbidden
  - Maintain good ventilation in rooms, do not turn off air-conditioner and exhaust fans
  - Maintain good personal hygiene, maintain good cough manner and perform hand hygiene frequently
  - Wear surgical mask when contact with others (e.g. hotel staff)
  - Check their body temperature twice daily. If they have fever or develop other symptoms, they have to inform the Centre for Health Protection about their health condition via dedicated hotline.
  - Pour about half a litre of water into each drain outlet (U-traps) every week
  - If there is abnormal functioning of exhaust fan, inform hotel staff immediately

# Special arrangement for guests undergoing compulsory quarantine

## Remind staff:

- Minimise contact with the guests as far as possible, avoid entering the rooms whenever possible
- Place the items required by guests outside the guest room
  - For example, use a trolley for the transportation of meal box with cover, and place the trolley outside the guest room to allow the guests to collect them without leaving the rooms
- If there is a need to enter the room,
  - Remind and ensure the guest is wearing a surgical mask before entry
  - Staff should wear a surgical mask and maintain appropriate social distance (i.e. at least 1 metre apart)
  - If there is a need to contact with the symptomatic guest or perform cleaning and disinfection of the guest room, staff should wear full PPE (surgical mask, eye protection (goggles/ face shield), gown and latex gloves)





# Special arrangement for guests undergoing compulsory quarantine

## If guest under compulsory quarantine develop symptoms

- Remind the symptomatic guest to put on surgical mask immediately and stay in his/her room
- Inform the Centre for Health Protection about his/her health condition via dedicated hotline for appropriate arrangement
- Relocate any asymptomatic roommate(s) to another room
- Advise other asymptomatic guests travelling along with the symptomatic guest to stay in their own rooms as far as possible
- If hotel staff need to contact with the symptomatic guest, his/her roommate(s) or other guests travelling along with the symptomatic guest, staff should put on full PPE (surgical masks, face shields, gowns and latex gloves)



# Enhancing environmental cleaning and disinfection



# Frequency of environmental cleaning and disinfection

Cover porous materials in common areas with materials which can be cleaned and disinfected easily as far as possible

Frequently touched areas	Frequency
Lift buttons, doorknobs, handles, countertops, etc.	at least every two hourly during day time
common areas (e.g. hotel lobby, corridor, common toilets)	at least twice daily
Garbage room	at least twice daily
Guest room	according to the prevailing policy of the hotel and upon change of guest(s)

# Disinfectant

Virus can survive in the environment for a period of time, therefore environmental cleaning and disinfection is very important

- **Choice of disinfectant**

- household bleach containing **5.25% sodium hypochlorite** is an effective and convenient disinfectant
- **Use of 1 in 49 diluted household bleach (mixing 1 part of household bleach containing 5.25% sodium hypochlorite with 49 parts of water) for disinfection**



# General environmental cleaning and disinfection



Remark:

Frequency of cleaning and disinfection has been enhanced to twice daily, with the use of 1 in 49 diluted household bleach under COVID-19 pandemic

# Terminal cleaning and disinfection of guest rooms



# Sequence of room cleaning and disinfection

- Before entering the room,
  - prepare all refilling items and utensils for cleaning and disinfecting
  - perform hand hygiene and put on appropriate PPE
- **Sequence /Principle of room cleaning and disinfection**
  - From higher area to lower area (e.g. bed → floor)
  - From clean to dirty  
(e.g. room → bathroom; water basin → bath tub → toilet bowl)
- Items used by the guests (contaminated) should be separated from clean items
- Clean items should be placed in clean trolley/ carts or clean area, should not be placed in a guest room which has not been disinfected, and all items used by the guests should not be placed in a room that has been disinfected
- Staff should remove his/her PPE and then perform hand hygiene upon leaving the room



# Terminal cleaning and disinfection of guest rooms

Uses	Dilution ratio	Preparation of household bleach (5.25%)
Potential contaminated surfaces	1 in 49	mixing <u>1 part</u> of 5.25% bleach with <u>49 parts</u> of water, leave for <b>15-30 minutes</b> , rinse with water
Surfaces contaminated with blood spillage or body fluid	1 in 4	mixing <u>1 part</u> of 5.25% bleach with <u>4 parts</u> of water, leave for <b>10 minutes</b> , rinse with water

For metallic surfaces, can use alcohol-based wipes containing at least 70% alcohol for disinfection

\*\*\* Diluted bleach should be used within 24 hours after dilution

\*\*\* Disinfection should be started from relatively clean areas to relatively contaminated areas



# Disinfection of furniture/surrounding

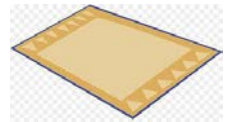
## Linen

- All used linen should NOT be agitated to prevent possible environmental / handler contamination
- All used linen should be packed in laundry bags at the site of collection; these bags are then securely tied
- Laundry bags must be no more than 2/3 full
- Fluid resistant bag of sufficient tensile strength is recommended
- Launder items in accordance with the manufacturer's instructions. According to the WHO, machine washing with warm water at 60–90°C (140–194°F) with laundry detergent is recommended. The laundry can then be dried according to routine procedures



## Carpet

- Remove visible soil on the carpet by absorbent, clean with detergent before performing disinfection
- Wiping with 1 in 49 diluted household bleach or use products that are suitable to disinfect the carpet
- If carpet cannot withstand chlorine-releasing agents, steam cleaning can serve as an alternative
- Carpets can be cleaned using a steam cleaner that achieves a minimum temperature of 71°C



# Disinfection of furniture/surrounding

## Pillows and mattress

- Covered by materials that can be disinfected easily

## Electronic products

- Follow the manufacturer's instructions for disinfection, if no manufacturer guidance is available, consider the use of alcohol-based wipes containing at least 70% alcohol

## Curtain

- Can be cleaned by laundering or by steam



## Others

- Disinfect all potentially contaminated surfaces or items by using 1 in 49 diluted household bleach, especially those areas frequently touched by guests, including all electric switches, telephone buttons, door knobs, etc.
- Spraying or fogging of chemicals as a way to decontaminate environmental surfaces or disinfect the air are not recommended because of limited efficacy and adverse health effects posed on workers and surrounding people

# Personal Protective Equipment (PPE) for cleaning staff



# Cleaning and Disinfection of General guest rooms

## Uniform of cleaning staff

- Staff should wear work uniform. The same work uniform should not be worn during meal break and needs to be changed at least daily

## Personal Protective Equipment (PPE)

- Staff should put on the appropriate PPE based on risk assessment for cleaning and disinfection
  - Surgical mask : should wear
  - Latex gloves: if anticipating the environment is grossly contaminated. Hand hygiene needs to be performed after removing the gloves. Wearing gloves cannot replace hand hygiene
  - Eye protection (goggles/face shield): if splashing is anticipated



# Cleaning and disinfection of guest room after check-out of guest(s) undergoing compulsory quarantine

## Uniform of cleaning staff

- Staff should wear work uniform. The same work uniform should not be worn during meal break and needs to be changed at least daily

## Personal Protective Equipment (PPE)

- Staff should put on the appropriate PPE based on risk assessment for cleaning and disinfection
  - Surgical mask : should wear
  - Latex gloves: if anticipating the environment is grossly contaminated. Hand hygiene needs to be performed after removing the gloves. Wearing gloves cannot replace hand hygiene
  - Eye protection (goggles/face shield): if splashing is anticipated



# Cleaning and disinfection of guest rooms with guests(s) undergoing compulsory quarantine period

\*\*\*Guest(s) undergoing compulsory quarantine is/are still inside the room

## Cleaning staff should wear full PPE

Surgical mask



**MUST**

Latex gloves



**MUST**

Eye protection  
(goggles/  
face shield)



**MUST**

Gown



**MUST**

**PPE needs to be changed from room to room**

# PPE -

## Set up of Donning Area



### • Cleaning staff

- Put on appropriate PPE in designated donning area before entry the guest room
- Requirement of Donning Area
  - Should be separated from doffing area
  - Clear signage to prevent entry of other people
  - Facilities
    - Washing facilities (70-80% alcohol-based handrub)
    - Donning poster
    - Mirror
    - Lidded rubbish bin (Foot-operated is preferred)
    - PPE required, including surgical masks, gowns, latex gloves and eye protection (goggles/ face shields)



**穿防護裝備 請跟次序**  
Donning PPE Step by Step

- 1 潔手**  
Perform Hand Hygiene
- 2 戴口罩 / N95口罩**  
Put on Mask / N95 Respirator\*  
\* 請記緊合性測試  
Remember to Perform Seal Check
- 3 戴護眼罩 / 全面罩及帽**  
Put on Eye Protection and Disposable Cap
- 4 穿隔離衣**  
Put on Gown
- 5 戴手套**  
Put on Gloves

注意：根據乎風險評估而選擇適當的防護裝備  
N.B.: Selection of PPE should be based on risk assessment

# PPE - Set up of Doffing Area

## • Cleaning staff

- Remove the PPE carefully in designated doffing area after cleaning and disinfection
- Requirement of Doffing Area
  - Should be separated from donning area
  - Clear signage to prevent entry of other people
  - Facilities
    - Washing facilities (70-80% alcohol-based handrub)
    - Doffing poster
    - Mirror
    - Lidded rubbish bin (Foot-operated is preferred)
    - Spare surgical masks
  - Avoid contact with any clean items and other people before removal of PPE
  - Should be cleaned and disinfected after use





# **Environmental cleaning and disinfection when there is blood, secretions, vomitus or excreta spillage**

## **PPE of cleaning staff**

Cleaning staff should put on appropriate PPE,  
including:

- (a) Surgical mask
- (b) Latex glove
- (c) Disposable gown
- (d) Eye protection (goggles/ face shields)
- (e) Cap (optional)



# If there is blood, secretions, vomitus or excreta spillage, take enhanced measures

## Disinfectant

Uses	Dilution ratio	Preparation of household bleach (5.25%)
Surfaces contaminated with blood spillage or body fluid	1 in 4	mixing <u>1 part</u> of 5.25% bleach with <u>4 parts</u> of water, leave for 10 minutes, rinse with water

For metallic surfaces, can use alcohol-based wipes containing at least 70% alcohol for disinfection

\*\*\*Diluted bleach should be used within 24 hours after dilution

\*\*\*Disinfection should be started from relatively clean areas to dirty areas

# If there is blood, secretions, vomitus or excreta spillage, take enhanced measures



請參閱新編《嚴重危害健康傳染病個案  
處理程序》有關清潔及消毒



# Disinfection of cleaning utensils



# Waste management

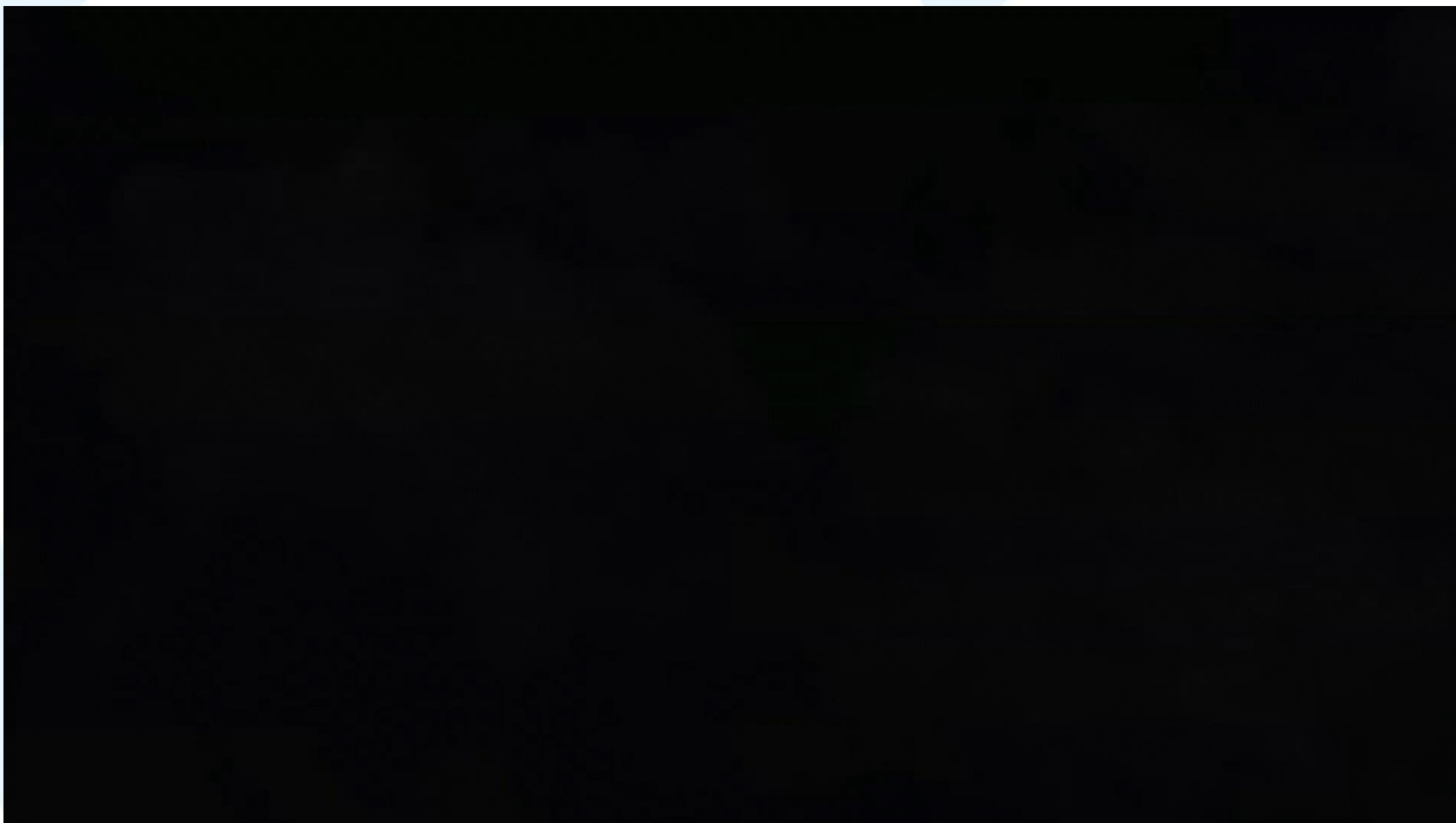


# Waste Management

- Domestic waste
- After the cleaning and disinfection procedure, put all the wastes in the garbage bag
- Remove PPE carefully and discard in garbage bag, and perform hand hygiene immediately
  - when hands are not visibly soiled, clean hands with 70-80% alcohol-based handrub
  - Wash hand with liquid soap and water when hands are visibly soiled or contaminated with blood or body fluid



# Waste management



**Cleaning and disinfection of environment when a suspected or confirmed case of COVID-19 is encountered**





# **Cleaning and disinfection of environment when a suspected or confirmed case of COVID-19 is encountered in hotel**

## **PPE of cleaning staff**

Cleaning staff should put on appropriate PPE, including:

- a) Surgical mask
- b) Eye protection (goggle/ face shield)
- c) Latex gloves
- d) Disposable gown
- e) Cap (Optional)



# Cleaning and disinfection of hotel environment when a suspected or confirmed case of COVID-19 is encountered

## Disinfectant

Uses	Dilution ratio	Preparation of household bleach (5.25%)
General surfaces	1 in 49	mixing <u>1 part</u> of 5.25% bleach with <u>49 parts</u> of water, leave for 15-30 minutes, rinse with water
Surfaces contaminated with blood spillage or body fluid	1 in 4	mixing <u>1 part</u> of 5.25% bleach with <u>4 parts</u> of water, leave for 10 minutes, rinse with water

For metallic surfaces, can use alcohol-based wipes containing at least 70% alcohol for disinfection

\*\*\*Diluted bleach should be used within 24 hours after dilution

\*\*\*Disinfection should be started from relatively clean areas to dirty areas

# Preventive and control measures: Hand Hygiene



# Hand Hygiene

The most simple and effective way to prevent spread of infectious diseases

- Liquid soap and water
  - when hands are visibly soiled or after using the toilet
- Alcohol-based handrub (70-80%)
  - when hands are not visibly soiled

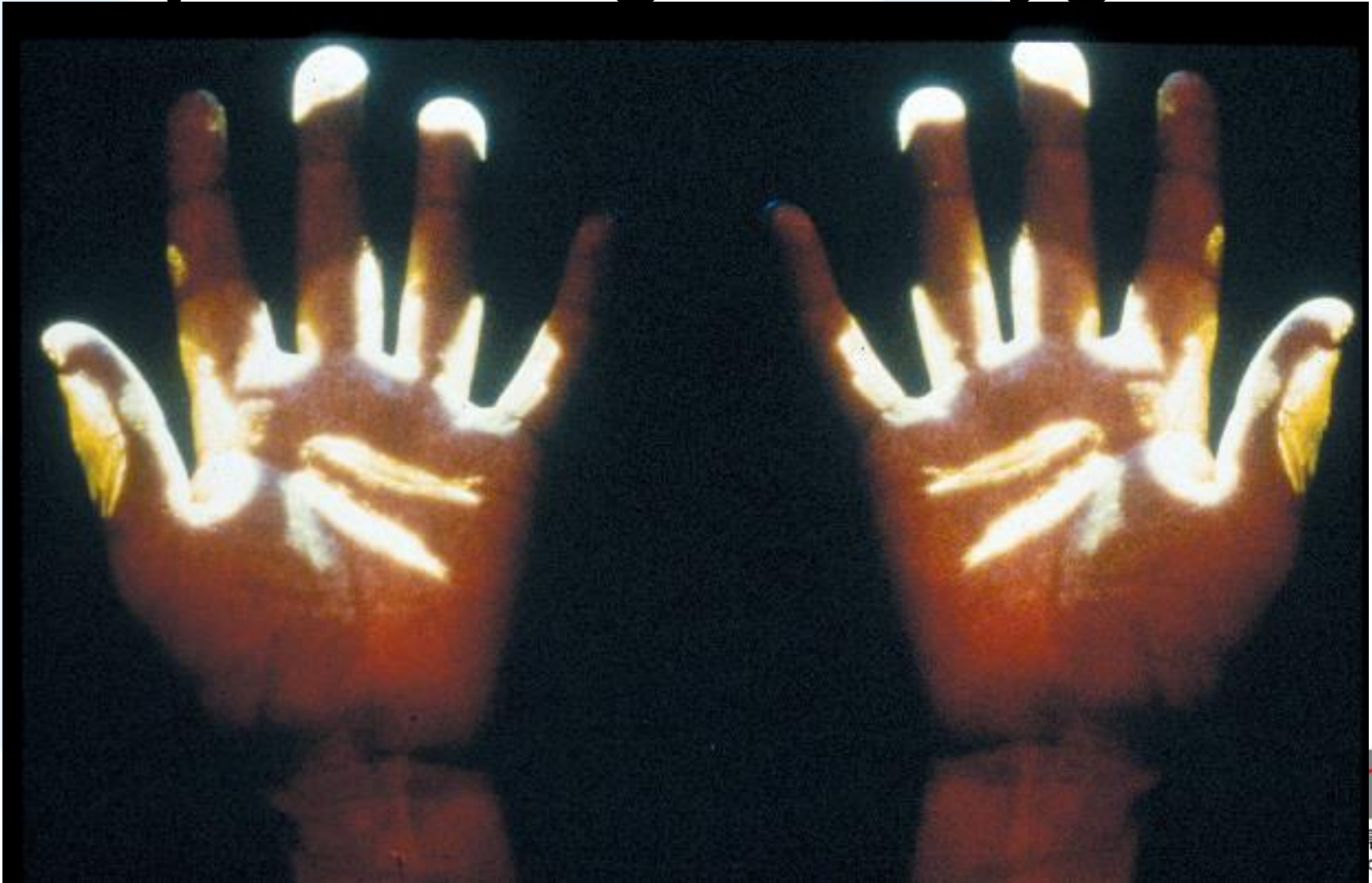


Rub hands for at least 20 seconds

# How to perform Hand Hygiene



# Common missing areas after performing hand hygiene



# Demonstration of hand hygiene



# Preventive and control measures: Proper use of PPE





# Use of Personal Protective Equipment (PPE)

- Put on appropriate PPE based on risk assessment (working procedure, environment)
- Personal Protective Equipment (PPE)
  - Surgical mask
  - Eye protection (goggle/ face shield)
  - Latex gloves
  - Disposable gown
  - Cap (Optional)



# Wearing of Surgical Mask

- Choose the appropriate size
- Cover mouth, nose and chin properly
- Avoid touching the outer surface of the surgical mask
- Change whenever it is damaged or soiled
- Used mask should be disposed in a lidded rubbish bin
- Perform hand hygiene after removal of mask



# Goggle/ Face shield

Goggle/ Face shield should be used for prevention of contamination of mucous membrane

- Wearing of glasses cannot be used as a substitute for wearing of goggle or face shield
- Contaminated goggle or face shield should be removed immediately and then perform hand hygiene



# Gloves

Gloves should be used when contact with body fluid, secretion and other contaminants

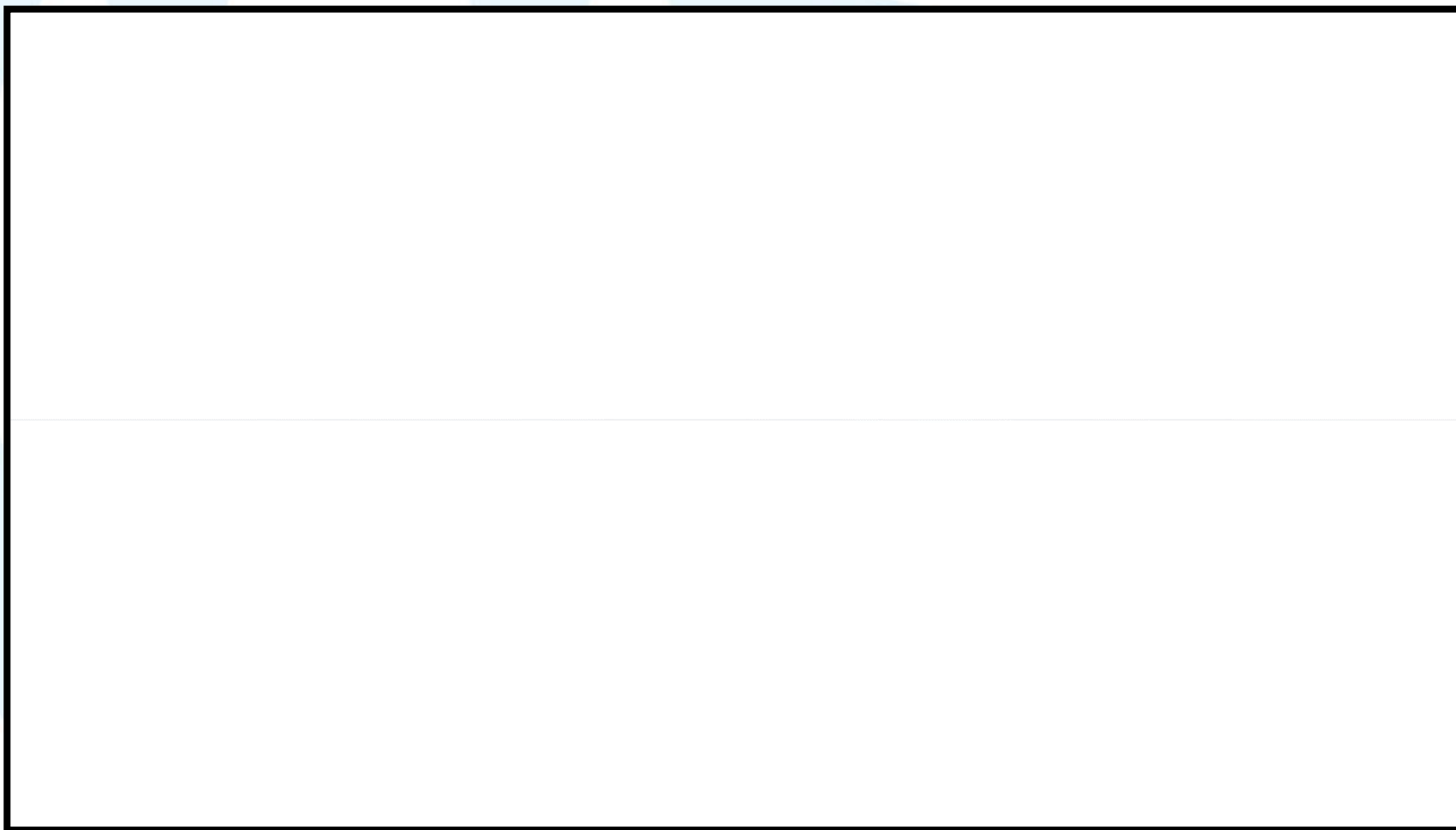
- Do not touch the face, eyes, mouth, nose and the surrounding after putting on gloves
- Change immediately whenever gloves is damaged or heavily contaminated
- Remove and discard the gloves after the work procedure and then perform hand hygiene
- Latex gloves should not be reused

**Gloves cannot be used as a substitute for hand hygiene**

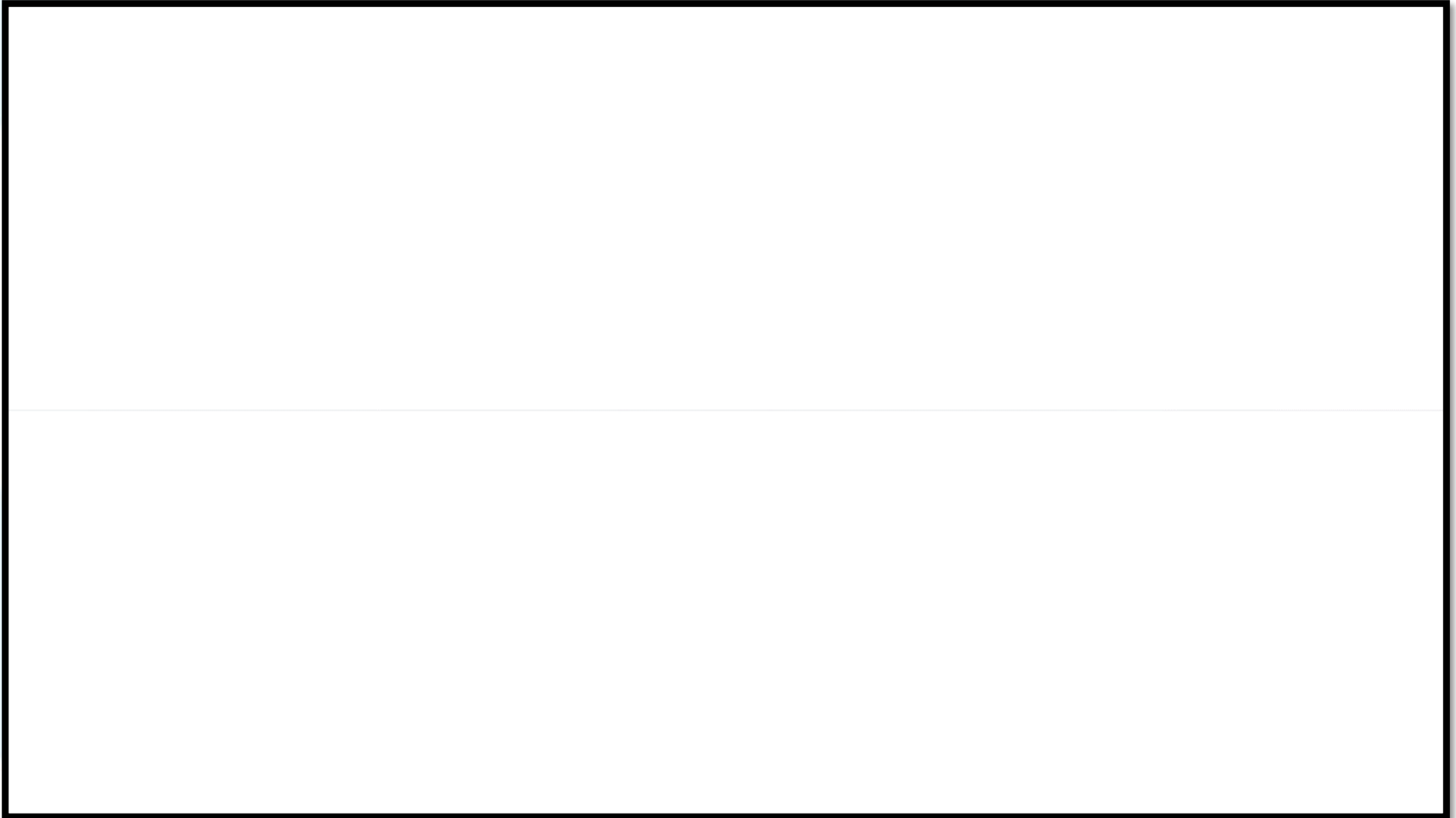
# Demonstration of donning and doffing of PPE



# Video demonstration of donning of PPE



# Video demonstration of doffing of PPE



- Mirror is needed in donning and doffing areas

**入 IN** 穿防護裝備  
請跟次序  
Donning PPE  
Step by Step

- 1** 潔手  
Perform Hand Hygiene
- 2** 戴口罩/  
N95口罩  
Put on Mask /  
N95 Respirator \*  
\* 緊記密合性檢查  
Remember to  
Perform Seal Check
- 3** 戴護眼罩/  
全面罩及帽  
Put on Eye Protection  
and Disposable Cap
- 4** 穿隔離衣  
Put on Gown
- 5** 戴手套  
Put on Gloves

注意：需視乎風險評估而選擇適當的防護裝備  
N.B.: Selection of PPE should  
be based on risk assessment

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**出 OUT** 除防護裝備  
請跟次序  
Removing PPE  
Step by Step

- 1** 除手套  
Remove Gloves
- 2** 潔手  
Perform Hand Hygiene
- 3** 除隔離衣  
Remove Gown  
由內向外捲起  
Folding Inside Out
- 4** 潔手  
Perform Hand Hygiene
- 5** 除帽及護眼罩/  
全面罩  
Remove Disposable Cap  
and Eye Protection
- 6** 潔手 (視乎情況)  
Perform Hand Hygiene  
(Optional)
- 7** 除口罩/  
N95口罩  
Remove Mask /  
N95 Respirator
- 8** 再潔手  
Perform Hand Hygiene  
AGAIN

注意：請將可棄防護裝備棄置於有蓋廢物箱  
N.B.: Disposable PPE should be properly  
discarded in dustbin with lid

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- Remove PPE gently to avoid contamination of others or the environment
- Perform hand hygiene after doffing of PPE



# Important points to note for the use of PPE

- Staff should wear uniform and working shoes and choose the appropriate PPE according to risk assessment before the cleaning procedure
- Donning and doffing of PPE should be performed in a designated room/ area
- Change PPE as soon as possible when being contaminated during the cleaning procedure
- Extra care should be paid when doffing to avoid cross contamination
- Avoid doffing in a group to avoid cross contamination
- Inadequate protection or overuse of PPE will pose danger to the staff
- Hand hygiene is the most effective way to prevent spread of infectious diseases

# Related information on COVID-2019

- Health Advice on Prevention of COVID-19 for Hotel Industry (Interim)  
[https://www.chp.gov.hk/files/pdf/nid\\_guideline\\_hotel\\_serving\\_guest\\_s\\_eng.pdf](https://www.chp.gov.hk/files/pdf/nid_guideline_hotel_serving_guest_s_eng.pdf)
- Guidelines on Infection Control & Prevention In Hotel Industry  
[https://www.chp.gov.hk/files/pdf/105\\_guideline\\_on\\_infection\\_control\\_prevention\\_in\\_hotel\\_industry.pdf](https://www.chp.gov.hk/files/pdf/105_guideline_on_infection_control_prevention_in_hotel_industry.pdf)

## 疫情下的新常態

新型冠狀病毒不會一下子消失，  
我們需學習適應與病毒並存的新常態



如有不適，應留在家中  
切勿外出或上班/上學  
盡快求診



避免用手觸摸眼、鼻及口，  
觸摸前後均需洗手

一般  
情況



咳嗽或打噴嚏時掩鼻口鼻



蓋好廁板後才沖廁

## 疫情下的新常態

新型冠狀病毒不會一下子消失，  
我們需學習適應與病毒並存的新常態



減少去家居以外地方  
舉辦的聚會及行程



避免握手及身體接觸。  
勤洗手，尤其在觸摸公用物品  
(例如升降機按鈕及扶手)後

一般  
情況



保持社交距離，  
與他人保持至少一米距離



避免別人多的地方。如難可避免，  
到人多的地方或乘搭公共交通工具，  
應佩戴口罩。口罩須妥善棄置，  
切勿胡亂丟棄

## 疫情下的新常態

新型冠狀病毒不會一下子消失，  
我們需學習適應與病毒並存的新常態



在出入口提供酒精  
搓手液及量度體溫



佩戴口罩

在  
工作間/  
學校



盡可能採用靈活  
上班/上課/午膳時間



減少大型聚會或會議  
如有需要，可使用視像方式進行會議



避免共用物品  
(例如電話、平板電腦、文具等)，  
定時消毒公共設施/儀器

## 疫情下的新常態

新型冠狀病毒不會一下子消失，  
我們需學習適應與病毒並存的新常態



保持室內空氣流通

在  
家居



妥善保養排水渠，  
每星期一次把約半公升清水  
注入每一排水口(U型隔氣口)



每星期一次以稀釋漂白水(1:99)  
徹底清潔家居，待15-30分鐘後用清水清洗  
金屬表面可使用70%酒精消毒



# Guideline and health education material for hoteliers

- Proper Use of Bleach

[https://www.chp.gov.hk/files/pdf/the\\_use\\_of\\_bleach.pdf](https://www.chp.gov.hk/files/pdf/the_use_of_bleach.pdf)

- Proper use of Mask

[https://www.chp.gov.hk/files/pdf/use\\_mask\\_properly.pdf](https://www.chp.gov.hk/files/pdf/use_mask_properly.pdf)

- Basic Infection Control for Property Management (Video)

<https://www.chp.gov.hk/en/static/101468.html>

- Updated information on COVID-2019

<https://www.coronavirus.gov.hk/eng/index.html>





# Thank you

