

# **Ebola virus disease (EVD)**

## **Infection control in Hotel Industry**

**Infection Control Branch**  
**Centre for Health Protection**  
**16 Sept 2014**



# Objectives

1. **Knowing the Ebola virus disease (EVD)**
2. **Knowing the infection control measures**
3. **Knowing the donning and doffing procedures of personal protective equipment**

# Aims of the infection control measures

- Minimize the infection risks
- Protect your staff and guest
- Perform risk assessment, use resources wisely



# “3Es”

(1) **E**arly Preparation

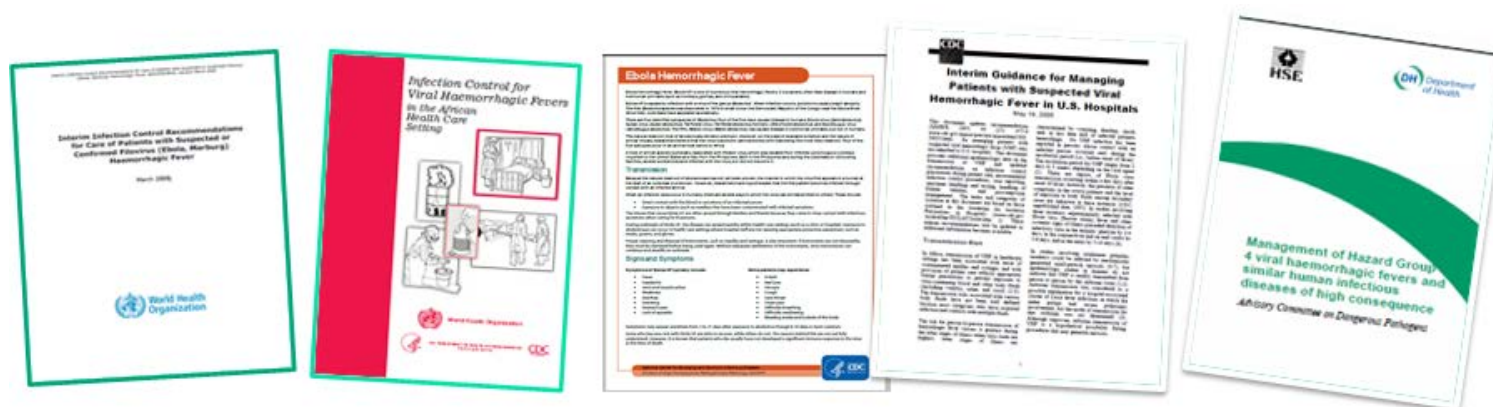
(2) **E**arly Identification

(3) **E**arly Reporting



# International guidelines

- WHO - Interim Infection Control Recommendations for Care of Patients with Suspected or Confirmed Filovirus (Ebola, Marburg) Haemorrhagic Fever
- WHO & CDC - Infection Control for Viral Haemorrhagic Fevers in the African Health Care Setting
- CDC - Interim Guidance for Managing Patients with Suspected Viral Hemorrhagic Fever in U.S. Hospitals
- UK HSE - Management of Hazard Group 4 Viral Haemorrhagic Fevers and similar



# Provide information to citizen

## ■ Updated information, infection prevention & control measures advices



**Latest Ebola virus disease updates**

- [Global statistics of affected area](#)

**Guidelines**

- **Health Professional**
  - [Interim Recommendations on Infection Control for Ebola Virus Disease \(EVD\) in Healthcare Setting](#)
  - [Infection Control Measures for Ebola Virus Disease \(EVD\) - Chinese Medicine Clinic \(Chinese version\)](#)
- **Donning and Doffing of Personal Protective Equipment**
  - [Boots](#)
  - [Shoe Covers](#)
- **Hotel Industry**
  - [Health Advice for Hotel Industry on serving guests with history of travel to or resided in the Ebola \ \(EVD\) affected areas](#)
- **Public Transport**
  - [Health Advice for Driver, Crew and Operational Staff of Public Transport Prevention of Ebola Virus \(EVD\)](#)
- **WorkPlace**
  - [Health Advice in Workplace Prevention of Ebola Virus Disease \(EVD\)](#)
- **Property Management**
  - [Health Advice for Properties Management Prevention of Ebola Virus Disease \(EVD\)](#)
- **School/ School Hostel**
  - [Health Advice for School/ School Hostel on Prevention of Ebola Virus Disease \(EVD\)](#)
- **Management of premises or event organisers**
  - [Advice to management of premises or event organisers - What you need to cooperate with public response for Ebola Virus Disease](#)
- **Public Functions**
  - [Health Advice for Participants of Public Function on Prevention of Ebola Virus Disease \(EVD\)](#)

[Scientific Committee on Emerging and Zoonotic Diseases - Papers Discussed / Recommendations](#)

**Health Education Materials**

**Centre for Health Protection**  
Department of Health  
The Government of the Hong Kong Special Administrative Region

GovHK 香港政府一站通 繁體版 簡體版

SEARCH Enter search keyword(s)

SITE MAP

General Public | Health Professionals | Institutions & Schools | Business & Workplace

Font Sizes A A A

Home  
About Us  
Scientific Advisory Structure  
Risk Communication Advisory Group  
Health Topics  
Statistics  
Recommendations  
Publications  
Infection Control Corner  
Media Room  
Training and Events  
e-Resources  
Other Languages  
Related Links  
Contact Us


**To prevent Ebola virus disease, avoid unnecessary travel to Equateur province of the Democratic Republic of the Congo, Guinea, Liberia, Nigeria and Sierra Leone**

**埃博拉(伊波拉)病毒病**



**Ebola virus disease**

Department of Health  
The Centre for Health Protection is a professional arm of the Department of Health for disease prevention and control

# Information or leaflets to business, workplace & citizen



## Maladie à Virus Ebola

Department of Health

### Agent responsable

La maladie à virus Ebola (EVD) ; précédemment connue sous le nom de Fièvre Ébolaïque (Ebola) est due à une infection au virus Ebola qui appartient à la famille appelée Filoviridae. Ebola est apparue pour la première fois en 1976 au Soudan et en République Démocratique du Congo, près du fleuve Ebola, ce qui lui a donné son nom.

### Caractéristiques cliniques

EVD est une maladie virale assez très grave. La période d'incubation varie de 2 à 31 jours. Les patients peuvent subir une multitude de signes accompagnés d'headache, de myalgie, de conjonctivite ainsi que de maux de gorge. Débutent ensuite les diarrhées, les vomissements, les éruptions cutanées et les hémorragies vésicales et hépatiques, ainsi que, dans certains cas, des hémorragies internes et externes. Le taux de mortalité de la maladie peut atteindre la valeur élevée de 90%.

### Mode de transmission

Le virus Ebola se transmet au sein de la population humaine par contact direct avec le sang, les sécrétions, les organes ou autres fluides corporels des animaux infectés. Certains chauves-souris frugivores sont considérées comme étant le réservoir naturel du virus Ebola. Le virus se dissémine ensuite dans la communauté par transmission humaine à humaine, l'infection étant suite à un contact direct (à travers la peau lésée ou les membranes muqueuses) avec le sang, les sécrétions, les organes ou autres fluides corporels de personnes infectées, et par contact indirect avec un environnement contaminé par de tels fluides. Les gens restent contagieux tant que leur sang contient le virus.

### Traitement

Il n'existe aucun traitement spécifique contre cette maladie. Les patients doivent être isolés dans des infrastructures adaptées afin d'éviter la propagation de l'infection. Les patients atteints de cette maladie doivent subir des soins intensifs.

### Prévention

Aucun vaccin homologué n'est disponible pour l'EVD. Pour prévenir la maladie, il est important que les voyageurs prennent les précautions suivantes :

- Éviter tout voyage non nécessaire en zone infectée
- Avoir une bonne hygiène personnelle et environnementale; évitez, par exemple, de vous laver soigneusement les mains avec du savon liquide ou d'utiliser une solution hydro-alcoolique avant de toucher les yeux, le nez et la bouche
- Éviter le contact rapproché avec les personnes infectées ou malades, et éviter tout contact avec le sang et les fluides corporels des patients, y compris les éléments susceptibles d'avoir été en contact avec le sang ou les fluides corporels d'une personne infectée
- Éviter tout contact avec les animaux
- Bien cuire les aliments avant leur consommation ; et
- Autour d'une zone infectée, surveiller de près sa santé pendant 21 jours. Si vous développez les symptômes de l'EVD, appelez le 999 et mentionnez le personnel du contact de votre état afin de préparer une consultation d'urgence.

Le Site Web du « Centre de Contrôle des Maladies » : [www.chp.gov.hk](http://www.chp.gov.hk)

Ligne d'urgence de l'Ebola des agents de l'Équipe d'Intervention et de Contrôle des Maladies : **2833 0111**

Imprimé en Juin 2014



# Guidelines on Infection Control & Prevention In Hotel Industry

June, 2008



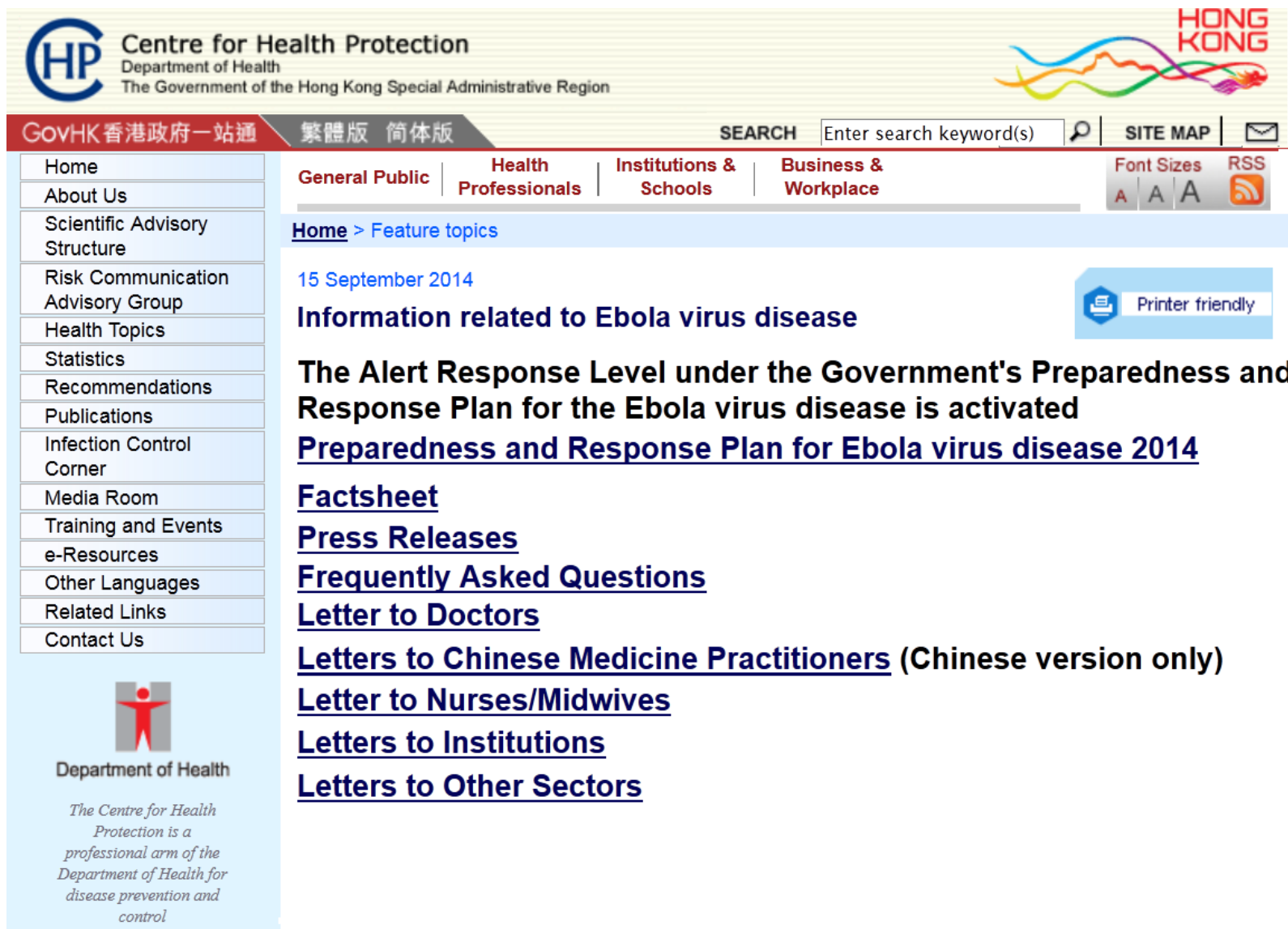
衛生署  
Department of Health



衛生署  
Department of Health





# Dedicated webpage on Ebola Virus Disease (EVD)



**Centre for Health Protection**  
Department of Health  
The Government of the Hong Kong Special Administrative Region

**GovHK 香港政府一站通** 繁體版 简体版

SEARCH  Enter search keyword(s)  [SITE MAP](#) 

[General Public](#) [Health Professionals](#) [Institutions & Schools](#) [Business & Workplace](#) [Font Sizes](#) [RSS](#)

[Home](#) [About Us](#) [Scientific Advisory Structure](#) [Risk Communication Advisory Group](#) [Health Topics](#) [Statistics](#) [Recommendations](#) [Publications](#) [Infection Control Corner](#) [Media Room](#) [Training and Events](#) [e-Resources](#) [Other Languages](#) [Related Links](#) [Contact Us](#)

**Home > Feature topics**

15 September 2014

**Information related to Ebola virus disease**

**The Alert Response Level under the Government's Preparedness and Response Plan for the Ebola virus disease is activated**

**[Preparedness and Response Plan for Ebola virus disease 2014](#)**

**[Factsheet](#)**

**[Press Releases](#)**

**[Frequently Asked Questions](#)**


**[Letter to Doctors](#)**


**[Letters to Chinese Medicine Practitioners](#) (Chinese version only)**

**[Letter to Nurses/Midwives](#)**

**[Letters to Institutions](#)**

**[Letters to Other Sectors](#)**

  
**Department of Health**  
*The Centre for Health Protection is a professional arm of the Department of Health for disease prevention and control*

  
**衛生署**  
Department of Health

# Stay Alert

- **Guest & Staff**
- **Within the past 21 days**
- **In affected areas or**
- **Contacted with “EVD patient”**

**For the updated information or the latest outbreak news,**

please visit the CHP website at: [http://chp.gov.hk/files/pdf/evd\\_affected\\_area.pdf](http://chp.gov.hk/files/pdf/evd_affected_area.pdf)

# List

**The hotel management ensure they have kept the record of staff roster & the guests information include the followings:**

- **Date ( In & Out)**
- **ID /Passport no.**
- **Age, sex , nationality**
- **Contact telephone**



# Develop sickness within 21 days returned from the affected areas :

- **Wear surgical mask and seek medical consultation**
- **If having fever, Or** any of the following symptoms/signs such as inexplicable bleeding, bloody diarrhoea, bleeding from gums, bleeding into skin, bleeding into eyes or blood in the urine
- **Arrange medical consultation in A&E department promptly.  
Call 999 and inform the call centre and the ambulance men  
about the travel history and condition of the sick.**



**While waiting for the ambulance to arrive, the sick person should be separated from other persons.**



# Cases investigation

- **Received a case reported by a doctor, CHP will refer to patient to Princess Margaret Hospital for medical treatment and isolation.**
- **If the patient is confirmed to have EVD, CHP will conduct investigation, contact tracing and to implement disease control measures in collaboration with related government department.**



## **If the case is working or living in hotel**

- **If the patient is confirmed to have EVD by laboratory testing, CHP will inform the hotel as soon as possible and will visit the premises where the patient resided/frequented to conduct investigation, contact tracing and to implement disease control measures.**
- **To control the disease, your cooperation with CHP is essential.**



# Transmission through

✗ **Water**



✗ **Air**

✗ **Food**



# Prevent contracting EVD

- **Note if there is any guests not feeling well, advice them to seek medical consultation promptly.**
- **Put on PPE when needed.**
- **If there is blood or body fluid contamination, perform cleansing and disinfection promptly.**
- **Avoid touching with blood, body fluid, animal or human dead body with your bare hands. – Must put on personal protective equipment**
- **Maintain good standard of environmental cleansing and disinfection to prevent germs spread.**

# Potential Infectious Materials

- **Blood**
- **Body fluids Excretions /Vomitus/ Secretions**
- **Contaminated items – e.g. Sharps**
- **Contaminated surface**
- **Touching non-intact skin**
- **Touching mucus membranes**



# Maintain Cough Manner



# Cover your wound



# Prepare for the supplies



# Environmental cleansing

1 to 99

1 to 49

1 to 4

**慎用漂白水 安全又衛生**

衛生防護中心  
Centre for Health Protection

5.25% 漂白水 Bleach

請用量杯  
準確地量度所需  
漂白水的份量

作一般環境清潔  
1份家用漂白水  
加入99份清水 9900毫升清水

消毒被嘔吐物、排泄物或  
分泌物污染的表面或物件  
1份家用漂白水  
加入49份清水 4900毫升清水

消毒被血液污染的  
表面或物件  
1份家用漂白水  
加入4份清水 400毫升清水

100毫升家用漂白水  
(5.25%次氯酸鈉)

**調校稀釋漂白水小貼士**

- 確保空氣流通
- 佩戴適當個人防護裝備，例如：口罩、膠手套、膠圍裙和護眼罩
- 稀釋時要用冷水，熱水會令成份分解並失去效能
- 切勿與其他化學劑、清潔劑混合，免生意外及降低殺菌效能
- 稀釋後，應在24小時內使用，並儲存在陰涼處
- 若不慎被漂白水濺入眼睛，必須立即用水沖洗最少15分鐘，並盡早求醫

衛生署  
Department of Health



# Infection control measures

(No EVD case)

- **Perform environmental cleansing  $\geq 1$  time per day.**
  - **Use **1 to 99** diluted household bleach for environmental cleansing, rinse with water, then wipe dry.**
  - **If there is blood, wipe-clean with **1 to 4** diluted household bleach , wait for 10 minutes before rinsing with water.**

## **If there is suspected EVD case**

- **Soon after the sick person left, perform a thoroughly stringent environmental cleansing & disinfection.**
- **Clean and disinfect all probable touched items.**
- **Lift panels, handles in corridors, furniture in the room, etc.**





## **If there is suspected EVD case,**

- **Use 1 part of household bleach containing 5.25% sodium hypochlorite to 49 parts of water,**
- **leave for 15-30 minutes, rinse with water and wipe dry afterwards.**



# Body fluid contamination

- **Body fluid: Blood, secretion, vomitus or excreta**
- **Procedure on cleansing and disinfection:**
  - 1) **Use strong absorbent disposable towels to wipe away the soils,**
  - 2) **Dispose the used towels in a waste bag carefully without contaminating oneself/ the environment**
  - 3) **Perform disinfection by using 1 to 4 diluted household bleach**
  - 4) **leave for 10 minutes, rinse with water and wipe dry afterwards.**

## Cleansing staff - personal protective equipment

- Rubber gloves <sup>D</sup>
  - Surgical mask
  - Water resistant gown or plastic apron on top of disposable gown
  - Eye protection (goggles/ face shield)
  - Shoe covers/ If environment is grossly contaminated with blood or body fluid, wear boots.
- <sup>D</sup> If there is blood, wear double gloves.



# After environmental disinfection

- **Doffing PPE carefully, and wash hands afterward.**
- **Dispose all wastes properly: used disposable towels, personal protective equipment.**



# Waste Management

**Carefully dispose the used PPE in a leak-proof waste bag, tie it up tightly, and put it in a covered rubbish bin, label it and put it in a safe undisturbed place until the status of case is confirmed.**



# Once EVD is confirmed

- **CHP will inform the hotel as soon as possible and will conduct investigation, contact tracing. The wastes will be collected by the Food and Environmental Hygiene Department.**
- **On the contrary, if EVD is excluded , the wastes can be disposed as usual.**



# Hand Hygiene



# Hand Hygiene - is the most important

- is the single most effective to prevent infection
- is the most essential infection control measure





**Hands should be washed with soap and water when hands are visibly soiled.**

**When hands are not visibly soiled, rub hands with alcohol-based handrub.**

WHO guidelines on Hand Hygiene in Health Care, 2009



衛生署

Department of Health

# Before hand hygiene - Point to note

- To ensure the best result of hand hygiene, first remove watches, ring & accessories from hands and wrists.



# Hand hygiene – hand washing

## Hand-washing



- Remove watch & all accessories from your hands.
- Wet your hand, apply liquid soap and then rub the seven parts of your hands for at least 20 seconds
- Rinse hands thoroughly under running water, then wipe-dry your hands with paper towel.
- Prevent re-contaminated your clean hands, wrap the faucet with paper towel when turning it off.



# Hand hygiene- Alcohol-based handrub



## Alcohol-based handrub

- Remove watch & all accessories from your hands.
- Apply alcohol-based handrub, rub the seven parts of your hands for at least 20 seconds, till it dry.
- Do not rinse with water
- Is portable.



# Alcohol-based handrub



**Public areas**

**70-80% alcohol-based handrub  
is available for guests**







醫院管理局  
HOSPITAL  
AUTHORITY

# 潔手技巧

Hand Hygiene Technique

# 搓手20秒

Rub hands for 20 seconds



衛生防護中心  
Centre for Health Protection



衛生署  
Department of Health

# Personal Protective Equipment (PPE)





# Personal Protective Equipment





# Surgical mask

- **Prevent breathe-in bacteria shed in droplets**
- **Select mask has the following features:**
  - **External layer is water-resistant**
  - **Middle layer acts as germs filter**
  - **Internal layer absorbs moisture**



# Points to note when wearing surgical mask



## Protect your eyes, nose and mouth - Goggles/Face shield

- **Goggles protect eyes**
- **Eyeglasses cannot substitute goggles**
- **Face shields protect eyes, nose & mouth**
- **If splashes may occur in a task, put on goggles/face shield.**
- **Used goggles / face shield, if not disposable items, clean & disinfect them thorough before re-use.**



# Disposable water-resistant gown

- Protect skin & clothes ; avoid contamination
- Wear gown when: there is chance of splashes or contacting of blood, body fluid, secretion or excreta in a task, e.g. handling of vomitus
- Wear gown or gown with apron depend on the task nature
- Doffing gown once the task is completed, and followed by performing hand hygiene.
- Take care not to contaminate skin or clothes when taking off the gown.
- The outer of used gown is contaminated, **folding it inside out**, and make it as a roll for disposal.



# Gloves

- **Wear gloves when contacting blood, body fluid, secretion, excreta, wound, mucous, and all kind of soiled items.**
- **Change gloves whenever there is broken or heavy soiled.**
- **Do not wash disposable latex gloves for re-use.**
- **Do not touch your face (eyes, nose & mouth), and surroundings when putting on gloves.**
- **Remove gloves once task is completed.**
- **Perform hand hygiene after removing gloves.**

**“Wearing gloves cannot substitute performing hand hygiene”**



# Points to note regarding use of PPE

- **Donning and doffing PPE properly**
- **Mark out the contaminated area**
- **Put on PPE before entry the contaminated area**
- **Remove PPE at the exit of the contaminated area**
- **Prevent contaminating other person or environment while doffing PPE, a spacious doffing area is recommended.**



# Points to note regarding use of PPE

- **Do not touch the outer surface of used PPE as they are contaminated.**
- **Change PPE promptly whenever they are grossly soiled**
- **To prevent wastes contaminated with the other environment, put all the wastes in waterproof waste bag on site, tie it tightly, and then put in a covered rubbish bin.**
- **Always wash hands after doffing PPE.**





**Donning PPE**



**Doffing PPE**







## Personal Protective Equipment (PPE)

If shoe covers are used, the PPE donning procedures will be



1

Hand  
Hygiene



2

Wear surgical mask



3

Wear face shield,  
then water repellent cap



4

Wear water-resistant gown



5

Wear shoe covers



6

Hand  
Hygiene



7

Wear  
gloves

Prepared by Infection Control Branch, Centre for Health Protection, updated on 26 Aug 2014 (Version 3)

Wash hands with soap and water, when hands are visibly soiled





# If shoe covers are used, the doffing PPE procedure will be



Prepared by Infection Control Branch, Centre for Health Protection, updated on 26 Aug 2014 (Version 3)

Wash hands with soap and water, when hands are visibly soiled



## If gum boots are used, the PPE donning procedures will be



Prepared by Infection Control Branch, Centre for Health Protection, updated on 26 Aug 2014 (Version 3)

Wash hands with soap and water, when hands are visibly soiled





# If gum boots are used, the doffing PPE procedure will be



Prepared by Infection Control Branch, Centre for Health Protection, updated on 26 Aug 2014 (Version 3)

Wash hands with soap and water, when hands are visibly soiled



# Summary

- ❑ **Internal contingency plan is in place**
- ❑ **Enhance alertness and awareness among the frontline staff**
- ❑ **Report promptly**
- ❑ **Provide 70-80% alcohol-based handrub in the public area and surgical mask for guest if needed.**
- ❑ **Ensure having sufficient PPE & disinfectant in store**
- ❑ **Provide training to frontline staff & conduct drill**
- ❑ **Maintain staff duty roster and guest list**

# Front desk

- ❑ **Surgical mask**
- ❑ **Alcohol-based handrub**
- ❑ **EVD health information leaflet**
- ❑ **Asking travel history**
- ❑ **Asking health condition**
- ❑ **If having fever, call ambulance , separate with others while waiting for ambulance.**



# Room service staff

- ❑ Enhance alertness and awareness
- ❑ Report to your senior promptly if there is guest feeling not well, vomitus / blood
- ❑ Wear PPE before cleaning procedure
- ❑ Use disposable towels with 1 to 4 diluted household bleach
- ❑ Put waste in bag, tie it tightly





# Thank You

