The University of Hong Kong

Recommendations on Cleaning / Disinfection for Infection Control
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Recommendations on Cleaning/Disinfection for Infection Control

There are Three Response levels in HKSAR Government’s Preparedness Plan for Influenza Pandemic (2014):
1. Alert Response Level
2. Serious Response Level
3. Emergency Response Level

Cleaning and Disinfection Principles

• After cleaning and disinfection with (1:99) disinfectant (e.g. 1 part of household bleach containing 5.25% sodium hypochlorite in 99 parts of water for non-metallic surfaces or 70% alcohol for metallic surfaces), wait for 15-30 minutes, and then rinse with water and wipe dry unless specified.

• If places are contaminated by respiratory secretions, vomitus or excreta, wipe the visible dirt away with highly absorbent disposable towels first. Then, disinfect the surface and 2-meter neighboring areas with 1 in 49 (1:49) diluted household bleach and leave the bleach for 15-30 minutes, then rinse with water and wipe dry unless specified.

• If places are stained with blood, the blood-stained articles should be wiped with highly absorbent disposable towels dipped in 1 in 4 (1:4) diluted household bleach and leave the bleach for 10 minutes, then rinse with water and wipe dry unless specified.

Alert Response Level

Alert Response Level corresponds to a situation where the risk of a novel influenza virus causing new and serious health impact in Hong Kong is LOW.

A. Cleaning/Disinfection Standard

• Lift cars and escalators
  ➢ Disinfect and wipe lift cars, escalator handrails with a cloth soaked with diluted household bleach (1:99) regularly.

• Lobby entrance areas
  ➢ Disinfect and wipe main building entrances, doorknobs and handles, security locks and buttons with diluted household bleach (1:99) regularly.

• Enquiry counters
  ➢ Disinfect and wipe counter surfaces, commonly used stationary with diluted household bleach (1:99) regularly.

• Corridors, staircases and floors
  ➢ Disinfect and mop corridors, staircases and floors with diluted household bleach (1:99) regularly.
• Public facilities
  - Disinfect and wipe public facilities such as chairs, resting area, public phones, vending machines, information kiosks and handrails with diluted household bleach (1:99) regularly.

• Outdoor environmental surfaces
  - Clean the potentially contaminated environmental surfaces e.g. floor, platform, stairs regularly with diluted household bleach (1:49) and rinse with water after 30 minutes.
  - If the surfaces contaminated by dead birds or their excreta, use diluted household bleach (1:49) and rinse with water after 30 minutes.

• Workplace
  - Disinfect and wipe commonly-used furniture and equipment, including telephones, window handles, intercoms, computer keyboards, printers, fax machines, trolleys with diluted household bleach (1:99) regularly and increase the frequency as circumstances required.
  - Clear and clean dustbins regularly with protective gloves and surgical mask on.
  - Vacuum carpets regularly.
  - Disinfect and mop floors with diluted household bleach (1:99) regularly and keep it dry.

• Lecture theatres and classrooms (in active use)
  - Disinfect and wipe all desks and chairs with diluted household bleach (1:99) regularly and increase the frequency as circumstances required.
  - Vacuum carpets regularly.
  - Disinfect and mop floors with diluted household bleach (1:99) regularly and increase the frequency as circumstances required. Then, keep it dry.

• Toilets
  - Disinfect and wipe the lids, seats and rims of the toilets with a cloth soaked with diluted household bleach (1:99) regularly.
  - Disinfect and wipe hand soap dispensers, toilet roll dispensers, hand dryers and cubicle doorknobs with diluted household bleach (1:99) regularly.
  - Pour some household bleach into the toilet bowels weekly or place self-dissolving bleach block in the main flushing water tanks.
  - Pour diluted household bleach (1:99) into urinals weekly.
  - Pour about half a litre of water into each drain outlet about once a week. The water traps must be filled with water.

• Refuse collection rooms
  - Disinfect and wash floors, walls and collection bins with diluted household bleach (1:99) regularly.
• Washing facilities drains
  ➢ Pour about half a litre of water into each drain outlet about once a week. The water traps must be filled with water.

• Public transport
  ➢ Clean the bus compartments, seats guardrails, air ducts and vents with diluted household bleach (1:99) regularly.
  ➢ Clean the bus air-conditioning system and filters with diluted household bleach (1:99) regularly.

B. Self-Protective Measures for Cleaning Staff
• Routine cleaning/disinfection
  ➢ Wear surgical mask and cleaning gloves.
  ➢ Wash hands before and after wearing the surgical mask and gloves.
  ➢ Wash hands before and after touching the surgical mask.
  ➢ Replace the surgical mask 1-2 times per day or as soon as it has become damaged/contaminated.
  ➢ Dispose of the used mask into a covered bin.
  ➢ Clean the cleaning cloth with bleach after cleaning/disinfection as appropriate.
  ➢ Wash hands with liquid soap frequently, particularly after each cleaning operation.

• Routine cleaning/disinfection of high risk areas (e.g. patient toilets)
  ➢ Wear surgical mask, cleaning gloves and goggles.
  ➢ Wear disposable plastic apron.
  ➢ Wash hands before and after wearing the surgical mask and gloves.
  ➢ Avoid touching the surgical mask during cleaning and disinfection.
  ➢ If the surgical mask is being touched, wash hands immediately.
  ➢ Replace the surgical mask after each cleaning or as soon as it has become damaged/contaminated.
  ➢ Dispose of the used surgical mask into a covered bin.
  ➢ Clean the cleaning cloth with bleach after cleaning/disinfection as appropriate.
  ➢ Wash hands with liquid soap frequently, particularly after each cleaning operation.

C. Facility Inspection Standard\textsuperscript{2, 5}
• Drainage pipes and traps
  ➢ Inspect all internal drainage pipes and associated sanitary fittings should be
inspected such as connected to the floor drain of upper floor, U-shaped trap, common drainage pipe, pipe bracket, drainage pipe, bottle trap and floor drain.

- Make sure that each sanitary fitting is fitted with a suitable trap.
- Make sure that all traps are functioning properly.

Report immediately to Estates Office if there are:
- Foul smell or odd sound from drainage pipes/sanitary fittings;
- Cracks in or rust stains on the drainage pipes/sanitary fittings;
- Loosened pipe brackets;
- Leakage or blockage of the drainage pipes/sanitary fittings;
- Bubbles coming out of the water closet from time to time.

Common areas
- Ensure refuse is not accumulated in common areas such as corridors, rooftops, staircases or lift pits.

Pest control
- If there are any signs of pest or rodent infestation such as excreta of rats, cockroaches, mosquitoes and flies, clean immediately. Engage pest control if necessary.

Water storage tanks
- Ensure all water storage tanks are properly covered and no overflow.

Ventilation system
- Ensure all ventilation system are cleaned and maintained regularly to prevent accumulation of dust and dirt.
Serious Response Level

Serious Response Level corresponds to a situation where the risk of a novel influenza virus causing new and serious impact to human health in Hong Kong is MODERATE.

A. Cleaning/Disinfection Standard

- Lift cars and escalators
  - Disinfect and wipe lift cars, escalator handrails with a cloth soaked with diluted household bleach (1:99) at least daily and increase the frequency as circumstances required.

- Lobby entrance areas
  - Disinfect and wipe main building entrances, doorknobs and handles, security locks and buttons with diluted household bleach (1:99) at least daily and increase the frequency as circumstances required.

- Enquiry counters
  - Disinfect and wipe counter surfaces, commonly used stationary with diluted household bleach (1:99) at least daily and increase the frequency as circumstances required.

- Corridors, staircases and floors
  - Disinfect and mop corridors, staircases and floors with diluted household bleach (1:99) at least daily and increase the frequency as circumstances required.

- Public facilities
  - Disinfect and wipe public facilities such as chairs, resting area, public phones, vending machines, information kiosks and handrails with diluted household bleach (1:99) at least daily and increase the frequency as circumstances required.

- Outdoor environmental surface
  - Clean the potentially contaminated environmental surfaces e.g. floor, platform, stairs with diluted household bleach (1:49) at least daily and increase the frequency as circumstances required and rinse with water after 30 minutes.
  - If the surfaces contaminated by dead birds or their excreta, use diluted household bleach (1:49) and rinse with water after 30 minutes.

- Workplace
  - Disinfect and wipe commonly-used furniture and equipment, including telephones, window handles, intercoms, computer keyboards, printers, fax machines, trolleys with diluted household bleach (1:99) at least daily and increase the frequency as circumstances required.
  - Clear and clean dustbins at least daily and increase the frequency as circumstances required with protective gloves and surgical mask on.
  - Vacuum carpets at least daily and increase the frequency as circumstances required.
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- **Lecture theatres and classrooms (in active use)**
  - Disinfect and wipe all desks and chairs with diluted household bleach (1:99) at least daily and increase the frequency as circumstances required.
  - Vacuum carpets at least daily and increase the frequency as circumstances required.
  - Disinfect and mop floors with diluted household bleach (1:99) at least daily and increase the frequency as circumstances required. Then, keep it dry.

- **Toilets**
  - Disinfect and wipe the lids, seats and rims of the toilets with a cloth soaked with diluted household bleach (1:99) at least daily and increase the frequency as circumstances required.
  - Disinfect and wipe hand soap dispensers, toilet roll dispensers, hand dryers and cubicle doorknobs with diluted household bleach (1:99) at least daily and increase the frequency as circumstances required.
  - Pour some household bleach into the toilet bowels weekly or place self-dissolving bleach block in the main flushing water tanks.
  - Pour diluted household bleach (1:99) into urinals weekly.
  - Pour about half a litre of water into each drain outlet about once a week unless specified. The water traps must be filled with water.

- **Refuse collection rooms**
  - Disinfect and wash floors, walls and collection bins with diluted household bleach (1:99) at least daily and increase the frequency as circumstances required.

- **Washing facilities drains**
  - Pour about half a litre of water into each drain outlet about once a week unless specified. The water traps must be filled with water.

- **Public transport**
  - Clean the bus compartments, seats guardrails, air ducts and vents with diluted household bleach (1:99) at least daily and increase the frequency as circumstances required.
  - Clean the bus air-conditioning system and filters with diluted household bleach (1:99) regularly and increase the frequency as circumstances required.

**B. Self-Protective Measures for Cleaning Staff**

- **Routine cleaning/disinfection**
  - Wear surgical mask and cleaning gloves.
- Wash hands before and after wearing the surgical mask and gloves.
- Wash hands before and after touching the surgical mask.
- Replace the surgical mask 1-2 times per day or as soon as it has become damaged/contaminated.
- Dispose of the used surgical mask into a covered bin.
- Clean the cleaning cloth with bleach after cleaning/disinfection as appropriate.
- Wash hands with liquid soap frequently, particularly after each cleaning operation.

- Routine cleaning/disinfection of high risk areas (e.g. patient toilets)
  - Wear surgical mask, cleaning gloves and goggles.
  - Wear disposable plastic apron.
  - Wash hands before and after wearing the surgical mask and gloves.
  - Avoid touching the surgical mask during cleaning and disinfection.
  - If the surgical mask is being touched, wash hands immediately.
  - Replace the surgical mask after each cleaning or as soon as it has become damaged/contaminated.
  - Dispose of the used surgical mask into a covered bin.
  - Clean the cleaning cloth with bleach after cleaning/disinfection as appropriate.
  - Wash hands with liquid soap frequently, particularly after each cleaning operation.
  - Take a shower from hair to toe and change clothes at the close of each working day.

- Cleaning/Disinfection of areas with suspected or confirmed cases (as advised by CHP or UHS)
  - Wear Full Personal Protective Equipment (PPE): type of mask as advised by CHP or UHS, overall protective clothing, gloves, goggles and shoe protection.
  - Follow gowning and de-gowning procedure.
  - Take a shower from hair to toe and change clothes at the close of each working day.

C. Facility Inspection Standard

- Drainage pipes and traps
  - Inspect all internal drainage pipes and associated sanitary fittings should be inspected such as connected to the floor drain of upper floor, U-shaped trap, common drainage pipe, pipe bracket, drainage pipe, bottle trap and floor drain.
  - Make sure that each sanitary fitting is fitted with a suitable trap.
- Make sure that all traps are functioning properly.

- Report immediately to Estates Office if there are:
  - Foul smell or odd sound from drainage pipes/sanitary fittings;
  - Cracks in or rust stains on the drainage pipes/sanitary fittings;
  - Loosened pipe brackets;
  - Leakage or blockage of the drainage pipes/sanitary fittings;
  - Bubbles coming out of the water closet from time to time

- Common areas
  - Ensure refuse is not accumulated in common areas such as corridors, rooftops, staircases or lift pits.

- Pest control
  - If there are any signs of pest or rodent infestation such as excreta of rats, cockroaches, mosquitoes and flies, clean immediately. Engage pest control if necessary.

- Water storage tanks
  - Ensure all water storage tanks are properly covered and no overflow.

- Ventilation system
  - Ensure all ventilation system are cleaned and maintained regularly to prevent accumulation of dust and dirt.
Emergency Response Level

Emergency Response Level corresponds to a situation where the risk of a novel influenza virus causing new and serious impact to human health in Hong Kong is HIGH and IMMINENT.

A. Cleaning/Disinfection Standard

- Lift cars and escalators
  - Disinfect and wipe clean lift cars, escalator handrails with a cloth soaked with diluted household bleach (1:99) every 2 to 4 hours.

- Lobby entrance areas
  - Disinfect and wipe main building entrances, doorknobs and handles, security locks and buttons with diluted household bleach (1:99) every 2 to 4 hours.

- Enquiry counters
  - Disinfect and wipe counter surfaces, commonly used stationary with diluted household bleach (1:99) every 2 to 4 hours.

- Corridors, staircases and floors
  - Disinfect and mop corridors, staircases and floors with diluted household bleach (1:99) at least daily and increase the frequency as circumstances required.

- Public facilities
  - Disinfect and wipe public facilities such as chairs, resting area, public phones, vending machines, information kiosks and handrails with diluted household bleach (1:99) at least daily and increase the frequency as circumstances required.

- Outdoor environmental surface
  - Clean the potentially contaminated environmental surfaces e.g. floor, platform, stairs at least daily and increase the frequency as circumstances required with diluted household bleach (1:49) and rinse with water after 30 minutes.
  - If the surfaces contaminated by dead birds or their excreta, use diluted household bleach (1:49) and rinse with water after 30 minutes.

- Workplace
  - Disinfect and wipe commonly-used furniture and equipment, including telephones, window handles, intercoms, computer keyboards, printers, fax machines, trolleys with diluted household bleach (1:99) at least daily and increase the frequency as circumstances required.
  - Clear and clean dustbins at least daily and increase the frequency as circumstances required with protective gloves and surgical mask on.
  - Vacuum carpets at least daily and increase the frequency as circumstances...
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- Disinfect and mop floors with diluted household bleach (1:99) at least daily and increase the frequency as circumstances required. Then, keep it dry.

- Lecture theatres and classrooms (in active use)
  - Disinfect and wipe all desks and chairs with diluted household bleach (1:99) at least daily and increase the frequency as circumstances required.
  - Vacuum carpets at least daily and increase the frequency as circumstances required.
  - Disinfect and mop floors with diluted household bleach (1:99) at least daily and increase the frequency as circumstances required. Then, keep it dry.

- Toilets
  - Disinfect and wipe the lids, seats and rims of the toilets with a cloth soaked with diluted household bleach (1:99) at least daily and increase the frequency as circumstances required.
  - Disinfect and wipe hand soap dispensers, toilet roll dispensers, hand dryers and cubicle doorknobs with diluted household bleach (1:99) at least daily and increase the frequency as circumstances required.
  - Pour some household bleach into the toilet bowels at least weekly or place self-dissolving bleach block in the main flushing water tanks.
  - Pour diluted household bleach (1:99) into urinals at least weekly and increase the frequency as circumstances required.
  - Pour about half a litre of water into each drain outlet about once a week unless specified. The water traps must be filled with water.

- Refuse collection rooms
  - Disinfect and wash floors, walls and collection bins with diluted household bleach (1:99) at least daily and increase the frequency as circumstances required.

- Washing facilities drains
  - Pour about half a litre of water into each drain outlet about once a week unless specified. The water traps must be filled with water.

- Public transport
  - Clean the bus compartments, seats guardrails, air ducts and vents with diluted household bleach (1:99) at least daily and increase the frequency as circumstances required.
  - Clean the bus air-conditioning system and filters with diluted household bleach (1:99) regularly and increase the frequency as circumstances required.

B. Self-Protective Measures for Cleaning Staff

- Routine cleaning/disinfection
- Wear surgical mask and cleaning gloves.
- Wash hands before and after wearing the surgical mask and gloves.
- Wash hands before and after touching the surgical mask.
- Replace the surgical mask 1-2 times per day or as soon as it has become damaged/contaminated.
- Wear disposable plastic apron for toilet cleaning and change daily. Replace immediately if it has become damaged/contaminated.
- Dispose of the used surgical mask into a covered bin.
- Clean the cleaning cloth with bleach after cleaning/disinfection as appropriate.
- Wash hands with liquid soap frequently, particularly after each cleaning operation.

- Routine cleaning/disinfection of high risk areas (e.g. patient toilets)
  - Wear surgical mask, cleaning gloves and goggles.
  - Wear disposable plastic apron.
  - Wash hands before and after wearing the surgical mask and gloves.
  - Avoid touching the surgical mask during cleaning and disinfection.
  - If the surgical mask is being touched, wash hands immediately.
  - Replace the surgical mask after each cleaning or as soon as it has become damaged/contaminated.
  - Dispose of the used surgical mask into a covered bin.
  - Clean the cleaning cloth with bleach after cleaning/disinfection as appropriate.
  - Wash hands with liquid soap frequently, particularly after each cleaning operation.
  - Take a shower from hair to toe and change clothes at the close of each working day.

- Cleaning/Disinfection of areas with suspected or confirmed cases (as advised by CHP or UHS)
  - Wear Full Personal Protective Equipment (PPE): type of mask as advised by CHP or UHS, overall protective clothing, gloves, goggles and shoe protection.
  - Follow gowns and de-gowns procedure.
  - Take a shower from hair to toe and change clothes at the close of each working day.

C. Facility Inspection Standard², ⁵

- Drainage pipes and traps
  - All internal drainage pipes and associated sanitary fittings should be inspected such as connected to the floor drain of upper floor, U-shaped trap, common
drainage pipe, pipe bracket, drainage pipe, bottle trap and floor drain.

- Make sure that each sanitary fitting is fitted with a suitable trap.
- Make sure that all traps are functioning properly.

- Report immediately to Estates Office if there are:
  - Foul smell or odd sound from drainage pipes/sanitary fittings;
  - Cracks in or rust stains on the drainage pipes/sanitary fittings;
  - Loosened pipe brackets;
  - Leakage or blockage of the drainage pipes/sanitary fittings;
  - Bubbles coming out of the water closet from time to time

- Common areas
  - Ensure refuse is not accumulated in common areas such as corridors, rooftops, staircases or lift pits.

- Pest control
  - If there are any signs of pest or rodent infestation such as excreta of rats, cockroaches, mosquitoes and flies, clean immediately. Engage pest control if necessary.

- Water storage tanks
  - Ensure all water storage tanks are properly covered and no overflow.

- Ventilation system
  - Ensure all ventilation system are cleaned and maintained regularly to prevent accumulation of dust and dirt.

HKU Task Force on Infectious Diseases

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References


