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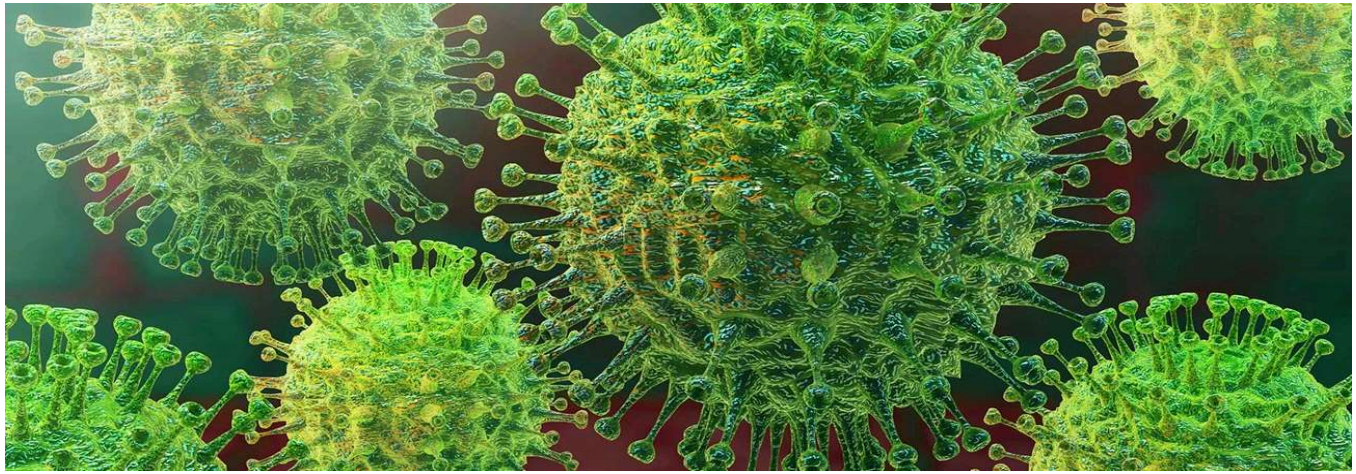
# Coronavirus (COVID-19)

## Infection Prevention and Control in Care homes



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# Overview of session

- Staff to have an understanding of what COVID-19 is.
- Staff to feel comfortable and competent in using Personal protective equipment (PPE).
- Staff to be familiar with IPC strategies, e.g. cough etiquette.
- Staff to be able to take a swab if required.
- Outbreak management (COVID-19)

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# What is Coronavirus and COVID-19

- Coronaviruses are a large family of viruses - they cause infections ranging from the common cold to Severe Acute Respiratory Syndrome (SARS)
- Coronaviruses circulate between animals and humans; sometimes new variants of the coronavirus emerge - such as COVID-19
- COVID-19 has the potential to spread widely as lack of immunity means everyone in the population is susceptible

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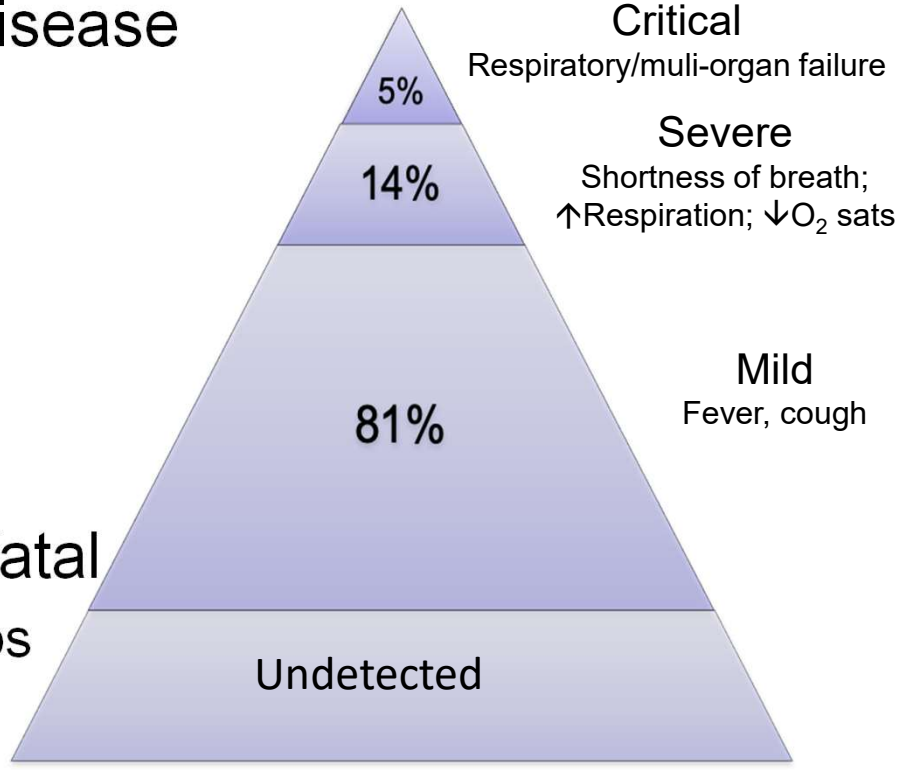
# What are the symptoms of COVID-19?

- Symptoms start 5 -11 days after exposure
- Similar to seasonal flu
- Majority have fever and dry cough (rapid onset)
- Symptoms last 5 - 6 days
- Severe illness starts day 7
  - ↑ Shortness of breath
  - Lung inflammation
  - Pneumonia

| Symptom | Proportion of cases |
|---|---|
| • Fever >37.8°C | 88% |
| • Dry cough | 68% |
| • Fatigue | 38% |
| • Sputum | 33% |
| • Shortness of breath | 19% |
| • Muscle/joint pain | 15% |
| • Sore throat | 14% |
| • Headache | 14% |

# Severity of COVID-19 illness

- Most people have no obvious symptoms (30-40%)
- Most children get mild disease
- More severe disease in:
  - Older people
  - Diabetics
  - Heart disease
  - Chronic respiratory disease
  - Immune compromised
- Less than 2% of cases fatal
  - Highest in high risk groups



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# How is COVID-19 transmitted?

- Exposure to **large respiratory droplets**
- Coughing/sneezing droplets from an infected person onto your mucous membranes: mouth, nose, eyes.
- Need close contact for this to occur (within 2 metres) droplets only travel 2m.
- Or via contaminated surfaces e.g. door handles, commodes
- Tissues contaminated with respiratory secretions
- Transferred by touching mucous membranes

**Not transmitted in air except during a procedure involving the respiratory tract that generates aerosols**

**Droplets survive up to 3 days on hard surfaces**

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# Infection Prevention & Control Strategies

1. Cough etiquette
2. Standard precautions
3. Isolation precautions

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# Personal hygiene to prevent spread

- Cough etiquette
- Cover mouth and nose with a tissue or your sleeve (not your hands)
- Dispose of tissues directly into bin
- Hand hygiene after contact coughing/sneezing (Ensure residents have hand wipes or alcohol gel available)

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# Standard Precautions

- Essential to minimize risk of transmission between staff and residents
- Will reduce the risk of transferring the virus from residents not recognized to have COVID-19

➢Hand hygiene

➢Protective clothing for contact with body fluid (hair covering not needed)

➢Safe disposal of waste

➢Clean equipment & environment

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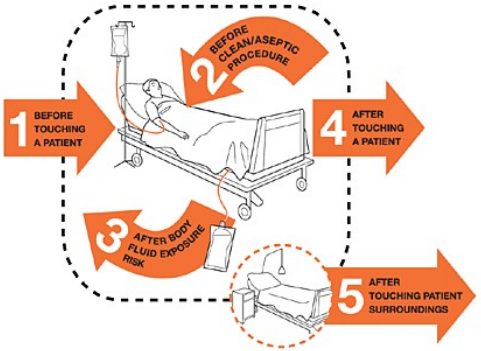
# Hand Hygiene




- Immediately before touching a resident
- Before a clean/aseptic procedure
- Immediately after touching a resident or their surroundings
- After removing gloves

**Alcohol gel is effective against COVID-19**

**Soap and water should be used if hands are soiled**

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# Resident hand hygiene


- Encourage residents to clean their hands
  - After coughing/sneezing
  - Before eating
  - After toilet
- Make hand wipes or alcohol gel available for residents to use

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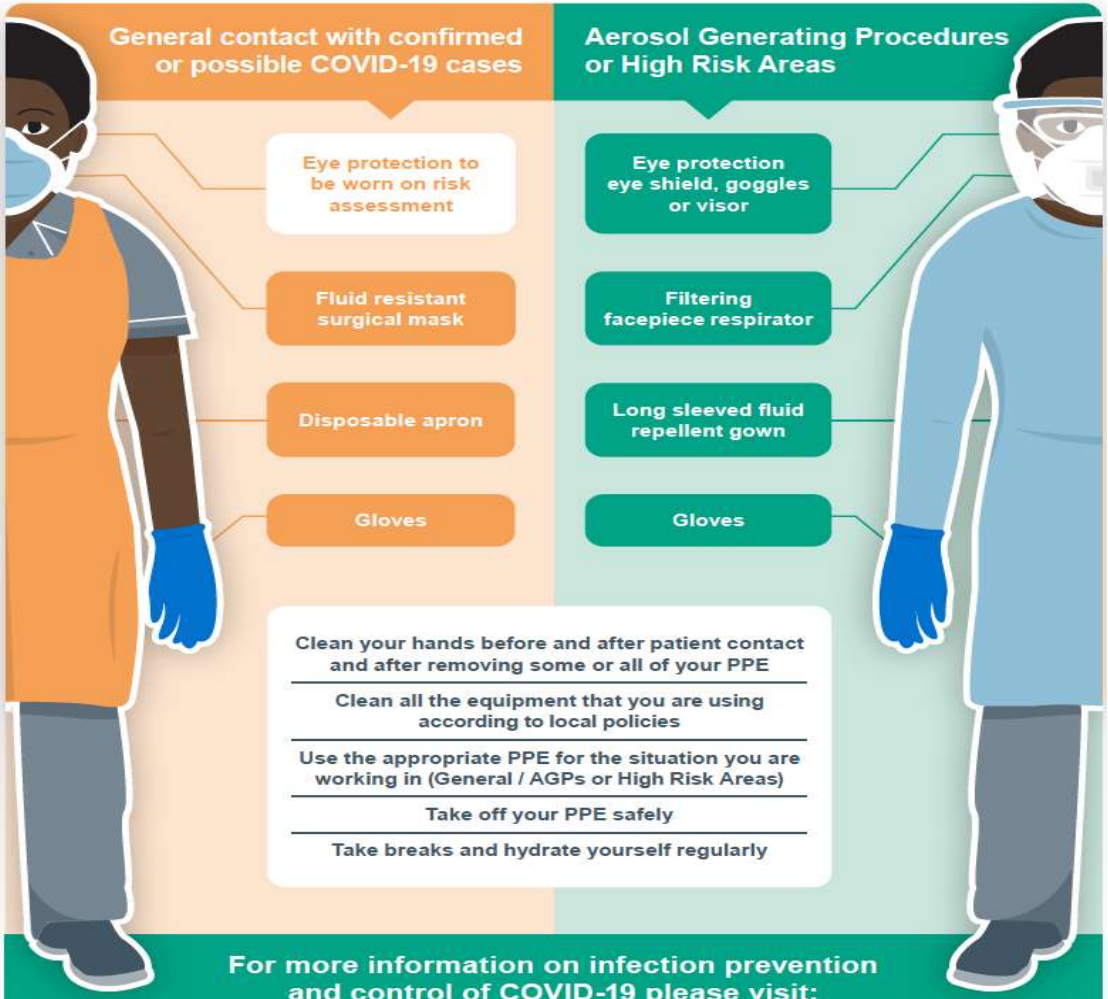
# COVID-19 Safe ways of working

# A visual guide to safe PPE



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# PPE : Glove

- For procedures involving DIRECT contact with blood or body fluid
- Risk assess procedure
  - if gloves are indicated put on **immediately before** commencing procedure
- Remove and decontaminate hands immediately after the procedure

**Take gloves off promptly!**

Virus (and other pathogens) are transferred between residents, surfaces and your own mucous membranes on your gloved hands

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# PPE : Aprons

- For procedures where there is a risk that the clothing may become soiled/close contact
- Risk assess procedure
  - If indicated put on **immediately before** commencing procedure
- Remove if contaminated or on leaving the resident and decontaminate hands

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# PPE Surgical Masks

- Can be worn between residents for sessional use
- Waterproof side on the outside (**Blue side**)
- Discard mask when moist or damaged
- Staff must not touch the front of their mask
- Remove PPE in this order:

1) Gloves (then decontaminate hands)
2) Apron (avoid touching contaminated front surface)
3) Mask/eye protection- need to decontaminate hands before going near your face)
4) Decontaminate hands after all PPE has been removed.

**Discard into clinical waste**

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# FFP3 masks

- Filters out very small particles
- Protects from inhalation of fine airborne particles
- Filtration effective only if sealed to contour of face (fit testing required)
- Required for procedures which generate aerosols of respiratory secretions (AGP)
- Not necessary for other close contact

**Examples of (AGP) Tracheostomy care, Non-invasive ventilation**

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# When to use a surgical face mask or FFP3 respirator

When caring for patients with **suspected or confirmed COVID-19,** all healthcare workers need to – prior to any patient interaction – assess the infectious risk posed to themselves and wear the appropriate personal protective equipment (PPE) to minimise that risk.

## When to use a surgical face mask

**In cohorted area (but no patient contact)**

**For example:**
Cleaning the room, equipment cleaning, discharge patient room cleaning, etc

**PPE to be worn**
- Surgical face mask (along with other designated PPE for cleaning)

**Close patient contact (within one metre)**

**For example:**
Providing patient care, direct home care visit, diagnostic imaging, phlebotomy services, physiotherapy, etc

**PPE to be worn**
- Surgical face mask
- Apron
- Gloves
- Eye protection (if risk of contamination of eyes by splashes or droplets)

## When to use an FFP3 respirator

**When carrying out aerosol generating procedures (AGP) on a patient with possible or confirmed COVID-19**

**In high risk areas where AGPs are being conducted** (eg: ICU)

**The AGP list is:**
- Intubation, extubation and related procedures such as manual ventilation and open suctioning
- Tracheotomy/tracheostomy procedures (insertion/open suctioning/removal)
- Bronchoscopy
- Surgery and post-mortem procedures involving high-speed devices
- Some dental procedures (such as high-speed drilling)
- Non-Invasive Ventilation (NIV) such as Bi-level Positive Airway Pressure (BIPAP) and Continuous Positive Airway Pressure ventilation (CPAP)
- High-Frequency Oscillating Ventilation (HFOV)
- High Flow Nasal Oxygen (HFNO), also called High Flow Nasal Cannula
- Induction of sputum

**PPE to be worn**
- FFP3 respirator
- Long sleeved disposable gown
- Gloves
- Disposable eye protection

**Always fit check the respirator**

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# Removal of PPE

- Discard mask when moist or damaged
- Remove PPE in this order:
  1. Gloves (then decontaminate hands)
  2. Apron/gown (avoid touching contaminated front surface)
  3. Mask/eye protection
- Decontaminate hands after all PPE has been removed

Public Health England

*Quick guide*

COVID-19

## Removal of (doffing) personal protective equipment (PPE)

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PPE should be removed in an order that minimises the potential for cross contamination.

**The order of removal of PPE is as follows:**

**1** **Gloves –** the outsides of the gloves are contaminated

Clean hands with alcohol gel



**2** **Gown –** the front of the gown and sleeves will be contaminated

**3** **Eye protection -** the outside will be contaminated

**4** **Respirator** Clean hands with alcohol hand rub. Do not touch the front of the respirator as it will be contaminated

**5** Wash hands with soap and water

**Remember!**

**Don't touch your mouth, nose or eyes.**

**Decontaminate your hands thoroughly on leaving the area/room.**

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# Isolation precautions in residential care

## For residents with known/suspected COVID-19

- Infection is transmitted by respiratory droplets and contact with respiratory secretions therefore:
  - Resident to remain in their room (including for meals)
  - Must have en-suite facilities
  - Protective clothing for close contact (2 metre)
  - Protective clothing for direct contact with body fluid
  - Clean surfaces daily
    - Clean frequently touched surfaces more often
    - Use detergent followed by disinfectant (Hypochlorite solution)
  - Dedicated patient equipment

**Remember to avoid touching your mouth, nose and eyes**

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# How to take a swab

PHE suggest swabbing up to 5 symptomatic residents or staff

- **HOW TO TAKE A COVID SWAB**
- Perform hand hygiene and put on PPE including surgical mask and eye protection.
- Have the resident lying flat or sitting on the bed with the head of the bed elevated.
- Remove the swab from the package taking care not to contaminate it. (Green top viral swab)
- With the residents head gently leaning back place the swab into the back of the throat (until gags) and then into both nostrils as far is comfortable.

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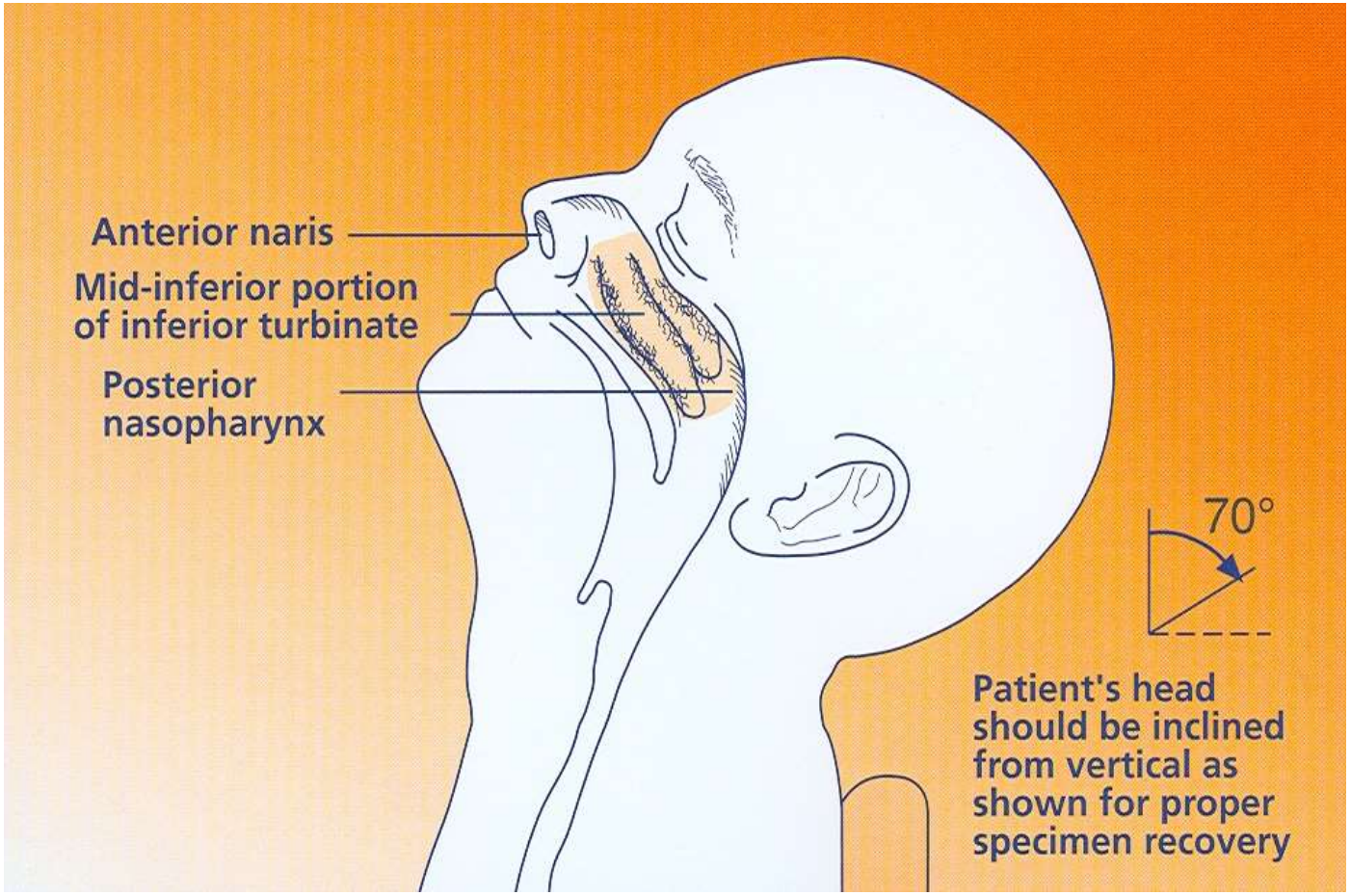
- Rub swab back and forth about 5 times, leave swab in place for a few seconds to absorb cells.
- Withdraw swab and insert into sample bottle. Close sample bottle tightly. Label specimen and request form appropriately.
- Remove PPE (mask last) and wash hands.


Anterior naris
Mid-inferior portion of inferior turbinate
Posterior nasopharynx
70°
Patient's head should be inclined from vertical as shown for proper specimen recovery

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# Environmental contamination

- Surfaces may become contaminated with respiratory secretions
  - Directly from coughing/sneezing
  - Indirectly by touching with contaminated hands
  - Contamination greatest where AGP performed

- COVID-19 unlikely to survive in significant numbers on surfaces for longer than a few days
  - Studies often recover virus RNA but many do not test if viable and able to cause infection

- Easily removed by cleaning
  - Detergent & water followed by disinfectant
  - Chlorine at 1000ppm effective

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# Disposal of waste & laundry

- Waste - discard as clinical waste
- Laundry - as infected laundry
- Body fluid spills - as usual local policy
- Uniforms
  - change before leaving work (Do not travel to work in uniform)
  - If washing at home wash separately and do not overfill machine at 60 degrees centigrade

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# Staff with COVID-19

- If you develop symptoms of a flu-like illness then DO NOT come into work:
  - Acute onset fever >37.8$^{o}$C and new persistent cough
- Inform your manager
- Self-isolate at home for seven days from onset of symptoms
  - If your symptoms worsen contact NHS 111
- Staff at high risk of complications from COVID-19
  - risk-assessment to manage their deployment

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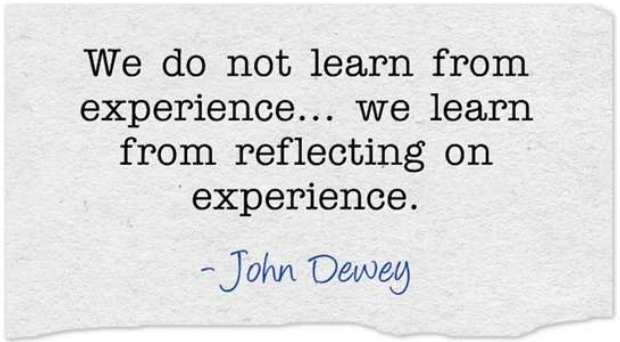
# Following an outbreak

Perform a deep clean on all effected areas:

- Hard surfaces: Chlorine based solution
- Soft furnishings: Steam cleaved

Reflect on what worked well and what didn't, group discussion.



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# Useful resources

**Public Health England Campaign Resources**
https://campaignresources.phe.gov.uk/resources/campaigns/101-coronavirus-

**Public Health England Coronavirus (COVID-19) infection control guidance** https://www.gov.uk/government/publications/wuhan-novel-coronavirus-infection-prevention-and-control

**NHS England**
https://www.england.nhs.uk/ourwork/eprr/coronavirus/

**NHS website**
https://www.nhs.uk/conditions/coronavirus-covid-19/

**Healthcare Infection Society**
https://his.org.uk/resources-guidelines/novel-coronavirus-resources/

**World Health Organization**
https://www.who.int/emergencies/diseases/novel-coronavirus-2019

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# Any Questions