

# Trustworthy Facts on COVID-19

Note 1. The situation is changing daily and readers should use hyperlinks for the most recent updates.

Note 2. The World Health Organization (WHO) states [trustworthy sources are essential](#) for instituting evidence-based prevention measures against COVID-19.<sup>1</sup> The following information is extracted from WHO, Public Health England (PHE), UK Department of Health (DH) and other trustworthy sources.

## What is COVID-19?

Coronaviruses are a [large family of viruses](#) occurring mostly in animals, including camels, cattle, cats and bats.<sup>2</sup> Human coronaviruses usually cause mild upper-respiratory tract illnesses, like the common cold.<sup>3</sup> However, animal coronaviruses can occasionally infect people and then spread between people such as with Middle East Respiratory Syndrome ([MERS](#)), Severe Acute Respiratory Syndrome ([SARS](#)), and now, COVID-19 ([SARS-CoV-2](#)) which commenced in China in Dec 2019.<sup>3</sup>

## What are the symptoms of COVID-19?

[Symptoms of COVID-19](#) infection may appear up to 2-14 days after exposure and can include continuous cough, difficulty breathing and high temperature. Most cases are mild however in some of cases, particularly in elderly or those with underlying disease, the illness can be severe.<sup>4</sup>

## World and UK situation

The world situation is changing daily and readers should click on hyperlinks for most recent update.

At March 12, 2020:

- [Internationally](#): 125,288 cases with 4,614 deaths from 118 countries (3.7% fatality rate).<sup>5</sup> On Mar 11, with the spread to so many countries, [WHO declared COVID-19 a Pandemic](#).<sup>6</sup>
- [UK](#): 590 confirmed cases with 8 deaths (0.14% fatality rate); risk to UK is High;<sup>7</sup> [specific regulations](#)<sup>8</sup> and the [UK COVID-19 Action Plan](#)<sup>9</sup> have been enacted to prevent further COVID-19 transmission.

## Mode of Transmission

[Coronaviruses are zoonotic](#) (i.e. spread from animals to people) and the source of SARS-CoV-2 is still being investigated.<sup>10</sup> UK PHE state, [the mode of spread](#) of SARS-CoV-2 from person-to-person is likely from close contacts via large respiratory droplets (e.g. when an infected person coughs or sneezes), and direct or indirect contact with infected respiratory secretions.<sup>3</sup> Under certain circumstances, airborne transmission of other coronaviruses is thought to have occurred via unprotected exposure to aerosols of respiratory secretions.<sup>3</sup>

## How “Infectious” is SARS-CoV-2?

Infectivity is calculated mathematically and termed “R0” (“R-naught”) which is the number of new cases likely to occur from each case. WHO stated the China [COVID-19 R0](#) is likely between 2-2.5,<sup>11</sup> but an [in-press paper by Wu et al](#) puts COVID-19 R0 at 3-6.5.<sup>12</sup> Such high R0 may account for the rapid spread of COVID-19 and makes it more infectious than the R0 of [3 for SARS](#),<sup>13</sup> and the [1.0-5.7 for MERS](#).<sup>14</sup> [By comparison](#) influenza R0 is 1.3 (Seasonal) to 1.8 (Pandemic) and measles R0 is 12-18.<sup>15</sup> With regard to fatality rates, the COVID-19 rate of 3.7%,<sup>5</sup> is considerably less fatal than [SARS \(11%\)](#),<sup>13</sup> and [MERS \(35%\)](#).<sup>14</sup>

## How can healthcare providers (HCP) protect themselves against SARS-CoV-2?

[UK COVID-19 Infection Prevention guidelines](#)<sup>16</sup> state that all HCP who enter the room of a patient with suspected or confirmed COVID-19 should adhere to:

- Standard Precautions with emphasis on hand hygiene,
- Respiratory and cough hygiene by patients
- Transmission-based precautions – combined airborne, contact and droplet precautions which should include tight-fitting gloves, long-sleeved gowns, respiratory (either FFP3 or mask depending on patient disease confirmation) and eye protection.<sup>10</sup>

## What if I exhibit COVID-19-like symptoms?

UK PHE [Stay at Home Guide](#)<sup>17</sup> applies to everyone, [including NHS staff](#),<sup>18</sup> and states that if you develop COVID-19 symptoms:

- You must remain in your home for 7 days after onset of symptoms (you may leave after 7 days even if symptoms persist)

*Note. “14 days Isolation” applies those exposed to a confirmed case, but have not yet shown symptoms)*

- Ask employer, friends, family for things you need to stay at home
- Keep 2 metres away from others; sleep alone if possible
- Wash hands with soap and water for 20 secs.
- Stay away from vulnerable, elderly and those with underlying health conditions.
- If symptoms worsen or persist, call NHS 111.

## How is COVID-19 waste handled in Healthcare and Non-Healthcare settings?

### 1. Healthcare Settings

- Waste disposal.** [PHE state](#)<sup>16</sup> waste from COVID-19 patients is classified as Category B waste and handled and disposed as **standard clinical waste** as described in Health Technical Memorandum 07-01.<sup>19</sup>

Note. The classification by PHE of COVID-19 as an airborne [High Consequence Infectious Disease \(HCID\)](#),<sup>20</sup> has no impact on the packaging or disposal of COVID-19 [wastes](#).

**For COVID-19 waste containment onsite [PHE requires](#):**<sup>16</sup>

- COVID-19 wastes be placed in leak-proof clinical waste bags.

**For transport of COVID-19 waste offsite [HTM-07-01](#) requires:<sup>19</sup>**

- Clinical waste bags (UN 3291) be transported in rigid, leak-proof packaging conforming with P621 requirements.
- Category B wastes be transported as orange-stream wastes as UN 3291 Clinical waste unspecified N.O.S.

Note. All potentially infectious COVID-19 specimens sent offsite (e.g. to reference laboratory) should be transported in accordance with Category B transportation regulations (i.e. UN 3373),<sup>22</sup> except for cultured samples for research or calibration which should be transported in accordance with Category A transportation regulations (i.e. UN 2814).<sup>23</sup>

**b. COVID-19 waste treatment**

COVID-19 waste is Category B **orange** and handled and disposed as routine clinical waste (UN 3291)<sup>11</sup>:

i. [UK PHE COVID-19 IPC Guidelines](#) in Section 14. Waste,<sup>16</sup> state:

- *“Waste from a possible or a confirmed case must be disposed of as Category B waste.”*
- *“The transport of Category B waste is described in Health Technical Memorandum 07-01: Safe management of healthcare waste.”*

ii. [HTM 07-01](#) states,<sup>19</sup>

- Category B waste (orange) can be rendered safe by alternative means.
- In Table 12, “Category B waste (**orange**) - Minimum Treatment: “Render safe at licensed/permitted treatment facility”
- In 9.3 and 9.4: “Rendered safe” includes use of **alternative treatment plants** (e.g. autoclaves) that meet STAATT level III criteria for vegetative organism or spore inactivation.

**c. Can reusable sharps containers and reusable clinical waste bins be used for COVID-19 wastes?**

Yes, reusable sharps containers and clinical waste bins are not prohibited and are the common mode of transport for UN 3291 clinical wastes. However when used in COVID-19 patient rooms, like reusable patient equipment, they should be **disinfected before removal** from the patient’s room (likely best carried out by clinical staff as room entry is restricted to “essential staff only” – see [PHE IPC Guide clause 6.3](#)).

[UK PHE COVID-19 IPC Guidelines](#), in Sections 11 and 12, state,

- *“re-useable equipment should be avoided if possible; if used, it should be decontaminated according to the manufacturer’s instructions before removal from the room”,* and
- *“After cleaning with neutral detergent, a chlorine-based disinfectant should be used, in the form of a solution at a minimum strength of 1,000ppm available chlorine.”*
- *“Reusable equipment must be decontaminated after use with a chlorine-based disinfectant as described above.”*

Note 1. Reusable bins have been used worldwide for the transport of clinical wastes for several decades and have not been cited in the transmission of disease to clinical staff or workers processing reusable bins.<sup>24,25</sup> In addition:

- SARS-CoV-2 is a respiratory, not a bloodborne pathogen;
- Sharps have low risk of respiratory secretion contamination; Non-sharp CW is twice-contained (bag+bin).
- Clinical waste treatment facilities should use engineered controls, administrative controls, work practices, and PPE to ensure the safety of their clinical-waste handling and processing staff;
- Automated processing of reusable bins can achieve High Level Disinfection via detergent+heat+disinfectant
- Coronaviruses are killed by most disinfectants and moderate heat (56°C/133°F for 30mins).

## 2. Waste disposal in Non-Healthcare Settings

The UK PHE COVID-19: [Decontamination in Non-healthcare settings guide](#)<sup>21</sup> applies to non-healthcare settings such as workplaces, offices, waiting rooms, hotel rooms, student accommodation and boarding schools *where a possible or confirmed COVID-19 case has spent time while symptomatic*.

The guide describes the cleaning, appropriate disposal of wastes, disinfection of equipment and hard surfaces, and the personal protective equipment (PPE) that should be worn.

Note. Under most circumstances, the amount of infectious virus on any contaminated surfaces is likely to have decreased significantly by 72 hours.

**a. Cleaning/Disinfection:** ensure detergent-disinfectant or post-cleaning disinfectant contains 1000 parts ppm available chlorine

**b. Wastes:**

- i. All wastes should be placed in a plastic rubbish bag, tied when full, and placed in a second bin-bag and tied.
- ii. Store in suitable and secure place until individual's results are known.
  1. If individual's test is negative – put bag in normal waste
  2. If individual's test is positive – store for 72 hrs and put in normal waste

Note. If storage not possible, arrange for collection by licensed Category B contractor.

**c. Follow-up.** Record names and contact details of staff involved in cleaning. If individual positive, the local Health Protection Team will advise on arrangements for follow up required for 14 days after the cleaning process took place.

## SharpSMART Business Continuity Plan for COVID-19 Pandemic Contingency

With the increasing number of COVID-19 cases in UK and the escalation to Pandemic status by WHO, SharpSMART understands the importance of co-operating with our customers to create assurance that procedures are in place for the safe continuation of business.

To ensure certainty of supply and services, we have:

- Assigned a Pandemic Crisis Management Team to monitor COVID-19, including:
  - Daily monitoring of the advice and guidances issued by the Department of Health and Social Care, Public Health England, and World Health Organization;
  - Daily monitoring of reported cases and infection rates;
  - Reducing non-essential travel between our office locations;
  - Internal monitoring of staff absence levels
  - Internal communications to provide updates to our staff and colleagues.
- Identified the Top 6 Business Risks during the COVID-19 Epidemic
- Applied a Business Impact Assessment Matrix to each of the 6 risks
- Developed responses which are automatically triggered when any matrix reaches the pre-determined trigger-point.

Information in the publication is current as at the time of writing. SharpSMART is continuing to monitor the situations and will publish updates on the following website: [www.sharpsmart.co.uk/coronavirus](http://www.sharpsmart.co.uk/coronavirus)

# References

1. Novel Coronavirus (2019-nCoV). Situation Report – 13 (Feb 2, 2020). World Health Organization. [https://www.who.int/docs/default-source/coronaviruse/situation-reports/20200202-sitrep-13-ncov-v3.pdf?sfvrsn=195f4010\\_6](https://www.who.int/docs/default-source/coronaviruse/situation-reports/20200202-sitrep-13-ncov-v3.pdf?sfvrsn=195f4010_6). Accessed Mar 12, 2020.
2. Coronavirus Disease 2019 (COVID-19) Situation Summary, March 12, 2020. Centers for Disease Control and Prevention. <https://www.cdc.gov/coronavirus/2019-nCoV/summary.html>. Accessed Mar 12, 2020.
3. COVID-19: epidemiology, virology and clinical features. Updated Mar 12, 2020. Public Health England. <https://www.gov.uk/government/publications/wuhan-novel-coronavirus-background-information/wuhan-novel-coronavirus-epidemiology-virology-and-clinical-features>. Accessed Mar 12, 2020.
4. Guidance for social or community care and residential settings on COVID-19. Public health England. <https://www.gov.uk/government/publications/guidance-for-social-or-community-care-and-residential-settings-on-covid-19/guidance-for-social-or-community-care-and-residential-settings-on-covid-19>. Accessed Mar 12, 2020.
5. Novel Coronavirus (COVID-19) Situation #52, Mar 12, 2020. World Health Organization. <https://experience.arcgis.com/experience/685d0ace521648f8a5beeeee1b9125cd>. Accessed Mar 12, 2020.
6. WHO Director-General's opening remarks at the media briefing on COVID-19 – 11 March 2020. World health Organization. <https://www.who.int/dg/speeches/detail/who-director-general-s-opening-remarks-at-the-media-briefing-on-covid-19---11-march-2020>. Accessed Mar 12, 2020.
7. Total UK Cases COVID-19 Cases Update, Mar 12, 2020. Public Health England. <https://www.arcgis.com/apps/opsdashboard/index.html#/f94c3c90da5b4e9f9a0b19484dd4bb14>. Accessed mar 12, 2020.
8. The Health Protection (Coronavirus) Regulations 2020, 2020 No 129, Public Health, England. [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/869827/Coronavirus\\_action\\_plan\\_-\\_a\\_guide\\_to\\_what\\_you\\_can\\_expect\\_across\\_the\\_UK.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/869827/Coronavirus_action_plan_-_a_guide_to_what_you_can_expect_across_the_UK.pdf). Accessed Mar 12, 2020.
9. Coronavirus Action Plan: A guide to what you can expect across the UK. [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/869827/Coronavirus\\_action\\_plan\\_-\\_a\\_guide\\_to\\_what\\_you\\_can\\_expect\\_across\\_the\\_UK.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/869827/Coronavirus_action_plan_-_a_guide_to_what_you_can_expect_across_the_UK.pdf). Accessed Mar 12, 2020.
10. Coronavirus. World Health Organization. <https://www.who.int/health-topics/coronavirus>. Accessed Mar 12, 2020.
11. Statement on the meeting of the International Health Regulations (2005) Emergency Committee regarding the outbreak of novel coronavirus (2019-nCoV). [https://www.who.int/news-room/detail/23-01-2020-statement-on-the-meeting-of-the-international-health-regulations-\(2005\)-emergency-committee-regarding-the-outbreak-of-novel-coronavirus-\(2019-ncov\)](https://www.who.int/news-room/detail/23-01-2020-statement-on-the-meeting-of-the-international-health-regulations-(2005)-emergency-committee-regarding-the-outbreak-of-novel-coronavirus-(2019-ncov)). Accessed Feb 16, 2020.
12. Wu D, Wu T, Liu Q, Yang Z. The SARS-CoV-2 outbreak: what we know. International Journal of Infectious Diseases. Journal pre-proof accepted Mar 4, 2020. Elsevier. [https://www.ijidonline.com/article/S1201-9712\(20\)30123-5/fulltext](https://www.ijidonline.com/article/S1201-9712(20)30123-5/fulltext). Accessed Mar 12, 2020.
13. Consensus document on the epidemiology of severe acute respiratory syndrome (SARS). World Health Organization. <https://www.who.int/csr/sars/en/WHOconsensus.pdf>. Accessed Feb 16, 2020.
14. WHO MERS-CoV Global Summary and Assessment of Risk, July 2019 (WHO/MERS/RA/19.1). Geneva, Switzerland: World Health Organization; 2019. Interim Infection Prevention and Control Recommendations for Patients with Known or Patients Under Investigation for 2019 Novel Coronavirus (2019-nCoV) in a Healthcare Setting. Jan 28, 2020. Centers for Disease Control and Prevention. <https://www.cdc.gov/coronavirus/2019-nCoV/hcp/infection-control.html>. Accessed Feb 3, 2020.

# References

15. Biggerstaff M, Cauchemez S, Reed C, Gambhir M, Finelli L. Estimates of the reproduction number for seasonal, pandemic, and zoonotic influenza: a systematic review of the literature. Centers for Disease Control and Prevention. BMC Infect Dis. BMC Infectious Diseases 2014, 14:480. <http://www.biomedcentral.com/1471-2334/14/480>. Accessed Feb 3, 2020.
16. COVID-19: infection prevention and control guidance. Updated Mar 6, 2020. Public Health England. <https://www.gov.uk/government/publications/wuhan-novel-coronavirus-infection-prevention-and-control/wuhan-novel-coronavirus-wn-cov-infection-prevention-and-control-guidance>. Accessed Mar 12, 2020.
17. Stay at home: guidance for people with confirmed or possible coronavirus (COVID-19) infection. Public health England. <https://www.gov.uk/government/publications/covid-19-stay-at-home-guidance/stay-at-home-guidance-for-people-with-confirmed-or-possible-coronavirus-covid-19-infection>. Accessed mar 12, 2020.
18. Coronavirus guidance for clinicians. National Health Service. <https://www.england.nhs.uk/coronavirus/>. Accessed Mar 12, 2020.
19. Health Technical Memorandum 07-01: Safe management of healthcare waste. UK Department of Health. [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/167976/HTM\\_07-01\\_Final.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/167976/HTM_07-01_Final.pdf). Accessed Feb 16, 2020.
20. High consequence infectious disease (HCID). Public health England. <https://www.gov.uk/guidance/high-consequence-infectious-diseases-hcid>. Accessed Mar 12, 2020.
21. COVID-19: Decontamination in non-healthcare settings. Feb 26, 2020. Public health England. <https://www.gov.uk/government/publications/covid-19-decontamination-in-non-healthcare-settings/covid-19-decontamination-in-non-healthcare-settings>. Accessed Mar 12, 2020
22. Suspected COVID-19 cases – Sampling and Packaging. Public Health England. [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/864490/PHE\\_2019-nCoV\\_sampling\\_and\\_packaging\\_poster.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/864490/PHE_2019-nCoV_sampling_and_packaging_poster.pdf). Accessed Feb 16, 2020.
23. COVID-19: Safe handling and processing for laboratories. Updated Mar 12, 2020. Public Health England. <https://www.gov.uk/government/publications/wuhan-novel-coronavirus-guidance-for-clinical-diagnostic-laboratories/wuhan-novel-coronavirus-handling-and-processing-of-laboratory-specimens>. Accessed Mar 12, 2020.
24. Grimmond T, Neelakanta A, Miller M, et al. A microbiological study to investigate the carriage and transmission potential of *Clostridium difficile* spores on single-use and reusable sharps containers. Am J Infect Control 2018;46:1154-9. doi.org/10.1016/j.ajic.2018.04.206.
25. Grimmond T. Using reusable containers for hospital waste – is there an infection risk? South Afr J Epidemiol Infect 2013;28(4):197-201.