

Coronavirus disease 2019 (covid-19): a guide for UK GPs

Mohammad S Razai, academic clinical fellow in primary care¹

Katja Doerholt, consultant in infectious diseases²

Shamez Ladhani, consultant in infectious diseases and public health³

Pippa Oakeshott, professor of general practice¹

¹ Population Health Research Institute, St George University of London, London, UK

² St George's University Hospital NHS Foundation Trust, London, UK

³ Public Health England, London, UK

Correspondence to M Razai mrzai@sgul.ac.uk

Box start

What you need to know

- Consider covid-19 infection in anyone with cough, fever, or breathlessness who has had contact with someone with covid-19, or has returned from a high risk area in the 14 days before the onset of symptoms
- Every effort should be made to avoid in-person assessment of patients with possible covid-19 in primary care
- GP surgeries should plan ahead and develop clear protocols for managing possible cases, including isolation procedures, personal protective equipment, seeking specialist advice, and decontamination
- If covid-19 infection is suspected in someone attending the practice, isolate the patient in a room (away from other patients and staff), close the door, and ask the patient to call NHS 111
- The guidance may change so it is essential to look at the latest guidance online (box 1)

Box end

The UK recorded its first confirmed case of acute respiratory infection due to coronavirus disease 2019 (covid-19) on 31 January 2020 and responded by quarantining at-risk individuals to contain the spread of infection. Executive agencies Public Health England (PHE)¹ and Health Protection Scotland (HPS) have since published guidance to healthcare providers on managing patients suspected to have the disease.

Guidance for the public and health professionals varies internationally, depending partly on risk levels and healthcare systems, and is being regularly updated.

This article offers a practical guide for GPs and others working in UK primary care on when to suspect covid-19 and how to respond. It is based on current UK guidance at the time of publication. We recommend readers consult the latest guidance (box 1).

Box start**Box 1 Essential resources**

covid-19: latest case definition, investigation, and initial clinical management of possible cases:

<https://www.gov.uk/government/publications/wuhan-novel-coronavirus-initial-investigation-of-possible-cases/investigation-and-initial-clinical-management-of-possible-cases-of-wuhan-novel-coronavirus-wn-cov-infection>

Coronavirus: latest information and advice including updated list of high-risk countries:

<https://www.gov.uk/guidance/wuhan-novel-coronavirus-information-for-the-public>

Guidance on isolation of healthcare workers:

<https://www.gov.uk/government/publications/novel-coronavirus-2019-ncov-guidance-for-healthcare-providers-with-staff-who-have-travelled-to-china/guidance-for-healthcare-providers-healthcare-workers-who-have-travelled-to-china>

Find your local Health Protection Team in England:

<https://www.gov.uk/health-protection-team>

covid-19: interim guidance for primary care including environmental cleaning after possible case:

<https://www.gov.uk/government/publications/wn-cov-guidance-for-primary-care/wn-cov-interim-guidance-for-primary-care>

covid-19: latest guidance for primary care on Health Protection Scotland (HPS):

<https://www.hps.scot.nhs.uk/a-to-z-of-topics/covid-19/>

World Health Organization (WHO): technical documents for coronavirus (covid-19) outbreak:

<https://www.who.int/health-topics/coronavirus>

European Centre for Disease Prevention and Control: latest guidance for EU/EEA:

<https://www.ecdc.europa.eu/en/novel-coronavirus-china>

US Centers for Disease Control and Prevention: latest guidance, advice and information:

<https://www.cdc.gov/coronavirus/2019-ncov/index.html>

Box end**What do we know about the clinical course of covid-19?**

The median estimated incubation period is five to six days (range 0 to 14 days).² The median age of confirmed cases is around 59 years.³ Initial data indicate that more than 80% of patients have asymptomatic or mild disease and recover, but about 15% may get severe disease including pneumonia, and around 5% become critically unwell with septic shock and/or multi-organ and respiratory failure.⁴ The case fatality rate is estimated at approximately 2% overall, but ranges from 0.2% in people under 50 to 14.8% in those over 80, and is higher among those with chronic comorbid conditions.⁵

When to consider covid-19

Consider covid-19 in anyone requiring hospital admission with a flu like illness, acute respiratory distress syndrome, or either clinical or radiological evidence of pneumonia.⁶

Otherwise, consider covid-19 in anyone who has either had contact with someone with confirmed covid-19 infection or returned from a high risk country in the 14 days before the onset of symptoms if they present with any of the following:

- acute respiratory infection of any degree of severity, including shortness of breath (difficult breathing in children), or cough (with or without fever), or
- fever with no other symptoms.

Clinicians should be alert to the possibility of atypical presentations in patients who are immunocompromised.

A contact is defined as:

- living in the same household as a person with a confirmed infection or
- direct contact with someone who has a confirmed infection, or their body fluids, without appropriate personal protective equipment or
- face-to-face contact with a person with a confirmed infection, for any length of time or
- being within two metres of a person with a confirmed infection for longer than 15 minutes or
- being advised by a public health agency that contact with a confirmed case has occurred.⁶

Which countries are considered high risk?

As of 2 March 2020, category 1 areas (highest risk) included Wuhan city and Hubei Province in China, Daegu or Cheongdo in Republic of Korea, Italian towns under containment measures, and Islamic Republic of Iran. Category 2 (high risk) countries included China, Thailand, Japan, Republic of Korea, Hong Kong, Taiwan, Singapore, Malaysia, Macau, Italy, Cambodia, Laos, Myanmar, and Vietnam (box 1). If the outbreak evolves in the UK and there is sustained secondary transmission, travel history may become less relevant.

What are the public being asked to do if they are concerned about covid-19?

The public are advised not to attend GP surgeries, community pharmacies, or hospitals if they have concerns that they may have been exposed to or become infected by covid-19. Instead, in the UK they are being advised to use NHS 111, the national non-emergency helpline.

GP surgeries should put measures in place to reinforce this approach by:

- Displaying large posters at the entrance to GP surgeries and a prominent notice on websites and online booking systems
- Using pre-recorded messages on telephone systems

- Sending patients SMS (text) messages
- Asking screening questions to patients as they arrive at reception:
 - o Do you have a high temperature or cough or breathlessness?
 - o Have you been in close contact with someone with coronavirus infection?
 - o Have you been to any of the following areas (see list above) in the last 14 days?

Box start

Box 2 How to respond if you suspect exposure or infection during a telephone consultation

If a patient calls for advice from home or elsewhere and covid-19 is suspected:

- Assess whether they are clinically stable and not critically unwell. If the patient is critically unwell and requires urgent transfer to hospital, call 999 and inform the ambulance call handler of a suspected case of covid-19
- Avoid a face-to-face assessment in primary care including out-of-hours centres and GP hubs. Advise the patient to call NHS 111
- If hospital care is being considered, call the local hospital infection specialist (infectious diseases physician or microbiologist/virologist) for advice to discuss possible safe assessment in hospital
- If hospital assessment is advised, agree a method of transport with the hospital team, such as the patient's own car or an ambulance. Patients should not use public transport or taxis to get to hospital

Box end

What to do if you suspect covid-19 during a consultation

If you suspect possible coronavirus infection during a face-to-face consultation with a patient, stop the consultation and leave the room, avoiding physical examination, direct physical contact, and exposure to respiratory secretions. Wash your hands thoroughly with soap and water. Isolate the patient and reassure them that you are following precautionary guidelines (box 3).⁷ The patient should call NHS 111 from the isolation room. (In Scotland the GP should seek advice from local infection specialist or Health Protection Team).

The NHS 111 clinician will contact the GP surgery after their assessment to advise on maintaining isolation of the patient pending transfer to home or hospital/receiving unit, or to continue routine GP care if coronavirus is not suspected. If further advice is needed, the GP should call the local infection specialist.

If the patient with suspected covid-19 is accompanied by family members or friends, they should all be isolated if they are close contacts of the patient.

Box start

Box 3 How to isolate patients with suspected covid-19 in primary care⁷

- Isolate individuals suspected to have covid-19, their waste, and their belongings in a room with the door closed and window open (switch off any air conditioning). Ensure that they

have a mobile phone or access to a telephone line and ask them to call NHS 111 for advice

- Plan in advance which room is most appropriate for isolation. It should ideally be located away from the waiting area and other consultation rooms. Avoid a room with carpeted floors or soft furnishing as these are difficult to decontaminate
- Avoid entering the isolation room. If further clinical history needs to be obtained this should be done by phone
- The patient must not use the surgery's communal toilets. A toilet facility should be reserved, preferably close to the isolation room. Advise the patient not to touch anything or anyone when walking to the toilet and to wash hands thoroughly afterwards.
- Communicate with the isolated patient preferably by phone or a conversation through the closed door to reassure them and provide updates.

Box end

What if the patient is unwell?

If the patient is critically ill, call 999 and advise the call handler that the patient may have covid-19 infection. If you make a clinical judgment that the patient needs further assessment or intervention, while awaiting transfer to hospital, bear in mind your own safety and those around you and wear personal protective equipment as described in [box 4](#).

Box start

Box 4 Personal protective equipment for covid-19 in primary care⁷

- If the person suspected to have covid-19 is identified on entry to a GP surgery and is isolated as soon as possible, there is no need for protective clothing or equipment
- If entry to the isolation room or contact with the patient is unavoidable, wear protective clothing in line with the standard infection control precautions, such as gloves, apron, and a standard fluid resistant surgical mask, and keep exposure to a minimum. All protective clothing and equipment should be disposed of as clinical waste.
- If a patient needs to be reviewed for another medical reason while on home isolation, s/he should call NHS 111. If a GP visit is needed and telephone consultation is not appropriate, seek advice from the local Health Protection Team on appropriate protective equipment. Aim to keep a distance of 2 metres from the patient and avoid physical examination⁸

Box end

What happens next?

Diagnostic sampling in primary care is not recommended and local pathways for obtaining nose and throat swabs vary. Testing may take place in the hospital, the patient's home, or in designated receiving units. Samples are sent for urgent testing at a designated PHE laboratory. Results should be available within 48 hours.

Patients with relevant contact or travel history who have no symptoms or those who have tested positive for covid-19 infection and have mild symptoms are likely to be asked to self-isolate ([box 5](#)).

After the patient is transferred from the surgery premises, the room should be kept closed until it has been cleaned. Follow detailed guidance (box 1) to ensure that the room is cleaned correctly. The person(s) cleaning the room should wear a disposable plastic apron, facemask and gloves. Dispose of all waste in a clinical waste bag, and clean and disinfect all hard surfaces, floors, chairs, door handles, sanitary fittings, and reusable non-invasive care equipment with a combined detergent disinfectant solution at a dilution of 1000 ppm available chlorine. All non-disposable items used for patient care that cannot be cleaned with detergent and disinfectant, should be put in a clinical waste bag and quarantined until the patient's test results are known. If the patient is later confirmed to have covid-19, seek further advice from the Health Protection Team.

Debrief with the practice team, especially those who were directly involved in management of the patient. Provide reassurance as appropriate. Staff who came into contact with a patient who tests positive for covid-19 should seek advice from occupational health and the local Health Protection Team. Practice staff who have been in contact with a suspected case are not required to self-isolate unless directed otherwise by the Health Protection Team (see box 1 for link to full guidance). Advise all staff if they have any symptoms to call NHS 111 for advice and to inform the practice.

Box start

Box 5 Self-isolation at home for people suspected to have covid-19 who are undergoing testing and are not critically ill⁹

Where possible, patients with suspected covid-19 should self-isolate at home while awaiting the outcome of testing. If an individual is not suitable for self-isolation at home (for example, the accommodation is not suitable or there are other vulnerable occupants in the same dwelling such as pregnant or immunosuppressed individuals) you should advise the Health Protection Team immediately (resources in box 1 offer guidance for circumstances where home isolation is not suitable).

- Self-isolation means staying indoors for 14 days from the date of contact with a confirmed case or return from high risk areas, avoiding contact with other people, and separating themselves from the rest of the household
- If contacts of a patient awaiting test results have had substantial close contact with a suspected case, they should call NHS 111 for advice
- Patients who are self-isolating are advised to
 - Stay in a well ventilated room, use a separate bathroom if available; if they have to share the bathroom clean it regularly, use separate towels, wear a clean mask when using a communal kitchen, use separate crockery and cutlery
 - Wash hands with soap and water before cooking and eating and after using the toilet
 - Have food, medication, and supplies delivered to you
 - Cover coughs and sneezes with a tissue and put it in a bin
 - Avoid going out except if advised to seek medical care and do not use public transport or taxis. Own vehicle may be used.

- Not have visitors at home
- Double bag and seal all waste. Subsequent disposal of waste is dependent on the result of the test for covid-19. Advice will be given by the Health Protection Team if confirmed positive

• Further information on self-isolation is available on the PHE website ([box 1](#))

Box end

Box start

Questions patients might ask about covid-19

How do I know if I am infected with the virus?

If you have fever, cough, or feel breathless **and** in the last 14 days you have had contact with someone with a confirmed infection **or** you have been to a high-risk country you may be infected. Please seek medical advice by calling NHS 111.

Is it contagious?

Yes, although we do not yet fully understand the precise routes of transmission. The virus is transmitted in respiratory droplets and can be spread by coughing, sneezing, or touching infected surfaces. Coronaviruses have also been detected in blood, faeces, and urine.

Will I get infected if I go out?

At the time of publication, it is very unlikely that you will get infected with the virus if you have not been to a high risk country or been in close contact with someone who is infected.

Visit the NHS website: <https://www.nhs.uk/conditions/coronavirus-covid-19/>

What precautions do I need to take to prevent infection?

Wash your hands frequently, especially after using public transport. Avoid touching your eyes and nose, and sneeze or cough into a tissue. Common disinfectants such as soaps and alcohol based hand rub are effective in eliminating the virus if it is on your hands. Face masks for the general public are not recommended.

What is the treatment for covid-19?

Most people do not need any specific treatment. Those who are ill will receive supportive care to help them recover from the illness in specialist settings.

Box end

Box start

Education into practice

- How aware are staff in your practice of the latest advice regarding covid-19?
- Can you describe a clear protocol for identifying and isolating patients with possible covid-19 as quickly as possible if they are seen in the surgery?
- Do you have personal protective equipment in the practice including surgical face masks, aprons, and gloves?
- Do you have the telephone number for the local health protection unit or infection specialist to call for advice?
- Do you have a clear process for seeking advice and referring to occupational health for any affected staff members?

Box end

Box start

How patients were involved in the creation of this article

No patients were involved in the creation of this article.

Box end

Box start

How this article was made

This article uses international websites, recent research papers, and the latest advice from Public Health England and Health Protection Scotland on identifying and managing patients with suspected covid-19 in primary care.

Box end

Competing interests *The BMJ* has judged that there are no disqualifying financial ties to commercial companies. The authors declare the following other interests: none.

Further details of *The BMJ* policy on financial interests are here:

<https://www.bmj.com/about-bmj/resources-authors/forms-policies-and-checklists/declaration-competing-interests>

Provenance and peer review: commissioned, based on an idea from the author; externally peer reviewed.

<eref>1 Public Health England. covid-19: epidemiology, virology and clinical features. 2020. <https://www.gov.uk/government/publications/wuhan-novel-coronavirus-background-information/wuhan-novel-coronavirus-epidemiology-virology-and-clinical-features></eref>

<eref>2 World Health Organization. Coronavirus disease 2019 (covid-19) Situation Report – 29. 19 February 2020. Available from: https://www.who.int/docs/default-source/coronaviruse/situation-reports/20200219-sitrep-30-covid-19.pdf?sfvrsn=6e50645_2</eref>

<jrn>3 Li Q, Guan X, Wu P, et al. Early transmission dynamics in Wuhan, China, of novel coronavirus-infected pneumonia. *N Engl J Med* 2020. . PubMed doi:10.1056/NEJMoa2001316 </jrn>

<eref>4 World Health Organization. WHO Director-General’s remarks at the media briefing on COVID-2019 outbreak on 17 February 2020. 2020 <https://www.who.int/dg/speeches/detail/who-director-general-s-remarks-at-the-media-briefing-on-covid-2019-outbreak-on-17-february-2020>.</eref>

<jrn>5 Wu Z, McGoogan JM. Characteristics of and important lessons from the coronavirus disease 2019 (covid-19) outbreak in China. Summary of a report of 72 314 cases From the Chinese Center for Disease Control and Prevention. *JAMA* 2020. doi:10.1001/jama.2020.2648. PubMed</jrn>

<eref>6 Public Health England Guidance. covid-19: investigation and initial clinical management of possible cases. 2020. <https://www.gov.uk/government/publications/wuhan-novel-coronavirus-initial-investigation-of-possible-cases/investigation-and-initial-clinical-management-of-possible-cases-of-wuhan-novel-coronavirus-wn-cov-infection#interim-definition-possible-cases></eref>

<eref>7 Public Health England. covid-19: interim guidance for primary care. Available from: <https://www.gov.uk/government/publications/wn-cov-guidance-for-primary-care/wn-cov-interim-guidance-for-primary-care></eref>

<eref>8 Briefing NHS. Primary care providers and the coronavirus (covid-19). 2020. <https://www.england.nhs.uk/wp-content/uploads/2020/02/coronavirus-primary-care-briefing.pdf></eref>

<eref>9 Public Health England. Guidance for NHS clinicians on home isolation of a patient whilst being tested for SARS-CoV-2. 2020. <https://www.gov.uk/government/publications/wuhan-novel-coronavirus-self-isolation-for-patients-undergoing-testing/guidance-for-nhs-clinicians-on-home-isolation-of-a-patient-while-being-tested-for-wuhan-novel-coronavirus></eref>