A 37 year-old healthcare assistant develops a cough. Next day, she wakes with a fever (which she measures at 37.4°C) and shortness of breath. She manages her condition at home for several days, experiencing increasing tiredness, loss of appetite, and a persistent dry cough. On the fifth day of her illness, she develops mild diarrhoea, and her chest feels quite tight. She takes her temperature, which has gone up to 38.1°C. Feeling unwell, she contacts her GP surgery for advice. She would like someone to listen to her chest, but the receptionist tells her not to come to the surgery and suggests a telephone consultation. She was previously well apart from mild asthma (on occasional salbutamol). Five years ago, she took citalopram for anxiety. She is a single parent of three children.

Novel coronavirus disease 2019 (covid-19) is an urgent and spreading threat whose clinical and epidemiological characteristics are still being documented. With a view to containing covid-19, a shift from in-person to remote consulting is occurring. Clinicians are thus faced with a new disease and a new way of interacting with patients.

This article will present some guiding principles on how to choose between telephone and video appointments, how to conduct a “query covid” consultation remotely, and considerations when arranging follow-up and next steps. It does not cover remote triage or how to set up video consulting in your practice. This article is intended as a broad orientation to a COVID-19 consultation. It does not cover every clinical eventuality, and should not be used as an official guideline for the management of a COVID-19 patient. National and local guidance are being urgently produced, and further research is being undertaken on specific aspects of management such as use of antibiotics.
Beginning the consultation

Check the patient’s identity (for example, if they are not known to you, ask them to confirm their name and date of birth). Speak to the patient if possible rather than their carer or family member. Ask where they are right now (most patients will be at home, but they may be staying somewhere else). Then, begin with a ballpark assessment (very sick or not so sick?). What are they currently doing (lying in bed or up and about)? Do they seem distressed? Too breathless to talk? If you are using video, do they look sick? If the patient seems sick, go straight to key clinical questions as appropriate. Otherwise, take time to establish why the patient has chosen to consult now (for example, are they or a family member very anxious, or are they concerned about a comorbidity?). Find out what the patient wants out of the consultation (for example, clinical assessment, certification, referral, advice on self isolation, reassurance).

Taking a history

Note the approximate incidence of key symptoms and signs listed in the infographic (right hand column), with the caveat that this list was generated in a different population and may not reflect your own case mix. The infographic guidance should be used flexibly to take account of the patient’s medical history and issues that emerge during the conversation. The vignette describes a typical mild to moderate case of this disease; more serious cases typically develop worsening respiratory symptoms, which may indicate pneumonia. Elderly and immunocompromised patients may present atypically.

Note the date of first symptom to date-stamp the onset of disease. Many but not all patients will have a thermometer at home. Ask how high their temperature is currently, how long the fever has lasted, and what the highest reading so far has been. The fever in covid-19 is often but not always >38.0°C and tends to persist beyond five days. Note that up to half of all patients with covid-19 have no fever at initial presentation.

Most but not all patients with covid-19 have a cough. It is usually dry, though a substantial proportion of patients have sputum production, and typically persists for more than five days. Fewer than half of patients with covid-19 have shortness of breath or difficulty in breathing. However, there was consensus among respondents around the following advice:

- Ask the patient to describe the problem with their breathing in their own words, and assess the ease and comfort of their speech. Ask open ended questions and listen to whether the patient can complete their sentences:
  - “How is your breathing today?”
  - “Are you so breathless that you are unable to speak more than a few words?”
  - “Are you breathing harder or faster than usual when doing nothing at all?”
  - “Are you so ill that you’ve stopped doing all of your usual daily activities?”

- Focus on change. A clear story of deterioration is more important than whether the patient currently feels short of breath. Ask questions such as
  - “Is your breathing faster, slower, or the same as normal?”
  - “What could you do yesterday that you can’t do today?”
  - “What makes you breathless now that didn’t make you breathless yesterday?”

- Distinguish seasonal influenza from covid-19 can be difficult, but, as a rule of thumb, the former is more likely to produce body aches and the latter shortness of breath. Gastrointestinal symptoms such as diarrhoea were initially said to be rare in covid-19, but there is now evidence that they are more common.

- Interpret the breathlessness in the context of the wider history and physical signs. For example, a new, audible wheeze and a verbal report of blueness of the lips in a breathless patient are concerning.

- There is no evidence that attempts to measure a patient’s respiratory rate over the phone would give an accurate reading, and experts do not use such tests. It is possible, however, to measure the respiratory rate via a good video connection. More generally, video may allow a more detailed assessment and prevent the need for an in-person visit.

Systemic symptoms include fatigue and muscle pain, though many patients have neither.

Ask about a history of contact with a case of covid-19 (laboratory confirmed or clinically suspected), especially one who had been closer than 1 metre for 30 minutes or more. The incubation period for covid-19 is 2-14 days, on average 5-6 days. Ask if anyone else in the immediate family is unwell. Other risk groups include healthcare workers, others working in a healthcare environment (such as cleaners), and transport workers. Travel to a known hotspot is less relevant as the virus is now widespread (type “WHO Situation Report” into Google for the latest worldwide incidence).

Features that generally indicate a condition other than covid-19 include nasal congestion (present in only 5% of cases), conjunctival congestion (1%), and other allergic symptoms such as itchy eyes. A preliminary report suggests that, although conjunctival involvement is rare in covid-19, it is a poor prognostic sign if present.9

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emerging evidence that they may be commoner than previously thought. Loss of appetite occurs in many patients, and there are widespread anecdotal reports that anosmia (loss of sense of smell) is a common and early symptom.

Red flags

Red flag symptoms which indicate that the patient needs urgent assessment (either in person or by a good video link, depending on the clinical circumstances) include severe breathlessness or difficulty breathing, pain or pressure in the chest, blue lips or face, and a story suggestive of shock (such as cold and clammy with mottled skin, new confusion, becoming difficult to rouse, or significantly reduced urine output). Haemoptysis occurs in about 1% of covid-19 patients and seems to be a poor prognostic symptom.

Remote physical examination

A physical examination will be almost impossible by phone and difficult by video, so you will have to make compromises. In a video consultation, assess the patient's demeanour; whether they are lying in bed or up and about, skin features (such as flushing, pallor, cyanosis—though note that if lighting is suboptimal this can be difficult to assess), and oropharynx. Congestion of the throat and tonsillar swelling are both rare (present in about 2% of covid-19 cases). When making records, note what you can and cannot see. You may or may not get a view of the patient's throat, for example. Assess respiratory function as best you can (box 1).

It may be possible to get the patient to take readings from instruments they have at home—for example, temperature, pulse, blood pressure, blood glucose, peak expiratory flow rate, and oxygen saturation. If you are using video, you can check whether the patient is using their equipment correctly (they may have purchased it only recently). Bring your own device into camera view to show them how to use it if necessary. Fitbit-type gadgets and smartphone apps can measure biomarkers such as pulse (and rarely, oxygen saturation), but there are many such products and their accuracy can be hard to judge. Rarely, patients may have a home oximeter. If you record a reading made by a patient with such a device, also note your confidence in its accuracy, especially if it seems out of line with your wider assessment.

Assess pre-existing conditions and medications taken. Asthma and cardiovascular disease are particularly relevant, and it is important to ensure that these are well controlled and the patient has adequate medication. Attend to mental health. Does the patient sound or appear upset or distressed? Formal mental health assessment instruments are unlikely to be useful in this setting. Are there relevant family issues (which may be within earshot or camera view) such as small children whose care will be affected if the patient becomes unwell?

What you should do

Managing mild or moderately severe illness

Most community based patients with covid-19 can be managed by remote advice (infographic). Covid-19 is a frightening illness even if the patient only has mild symptoms. Explain that the condition is difficult to assess), and oropharynx. Congestion of the throat and tonsillar swelling are both rare (present in about 2% of covid-19 cases). When making records, note what you can and cannot see. You may or may not get a view of the patient’s throat, for example. Assess respiratory function as best you can (box 1).

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We recommend that, in the case of patients with a very poor prognosis (for example, multimorbidity and other risk factors), a “ceiling of treatment” conversation is considered. If the patient is very sick and death almost inevitable whether ventilated or not, some people may prefer to stay home and opt for palliative management. Many such patients will already have an advance care plan and DNACPR (do not attempt cardiopulmonary resuscitation) flag, and in those who do not, urgent efforts should be made to put these in place to avert unwanted emergency intervention.

Notification

Covid-19 is a notifiable disease in the UK. Laboratory confirmed cases should be notified immediately; current professional consensus is that clinically suspected cases should also be notified. At the time of writing, the situation is changing rapidly. This article will be updated as new evidence emerges. National and local protocols are likely to emerge for the topics covered in this article and other aspects of care in covid-19.

How this article was created

The article was produced at speed to address an urgent need for guidance. Advice on management of covid-19 was captured in real time from published and unpublished research findings (much of it from China) and official guidance. In the absence of direct research evidence on how to assess breathlessness over the phone, we also sought expert opinion through a brief straw poll survey of 50 people (mostly doctors) who do this in their job. Advice on telephone consultations is based on a previous BMJ review and a fast-track grey literature paper on telephone advice in covid-19. Advice on video consulting is based on research by TG’s group and others (including an extensive narrative review of the literature, various empirical studies, and data currently being written up for publication) and guidance produced by the Scottish Government and an English NHS trust to which TG’s team contributed.

Education into practice

• How would you feel if you or a close relative were unwell with suspected covid-19 and wanted to see a doctor, but you were offered a phone call instead?
• There are many available tools for video consulting, which are not difficult to set up. What will you need (hardware and software) to get one up and running in your surgery now?
• Do you know your local protocol for arranging emergency admission of a patient with covid-19?

How patients were involved in the creation of this article

Patients with covid-19 or possible covid-19 were not involved in the writing of this paper for practical reasons.

Contributors: TG and GKCH conceived the article and are guarantors. GKCH produced an initial outline of a clinical consultation assisted by Fan-Shuen Tseng (medical student). TG amended general guidance she had previously produced on video consultations to address the specific situation of a possible covid-19 case. TG drafted the article, which was amended by GKCH and JC, and agreed by all authors.

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Infographic for printing out

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Covid-19: remote consultations

A quick guide to assessing patients by video or voice call

**1. Set up**
Prepare yourself and decide how to connect

- Have current 'stay at home' covid-19 guidance on hand

**2. Connect**
Make video link if possible, otherwise call on the phone

- Check video and audio
- Can you hear/see me?

**3. Get started**
Quickly assess whether sick or less sick

- Rapid assessment
  - If they sound or look very sick, such as too breathless to talk, go direct to key clinical questions

**4. History**
Adapt questions to patient's own medical history

- Contacts
  - Close contact with known covid-19 case
  - Immediate family member unwell
- Occupational risk

**5. Examination**
Assess physical and mental function as best as you can

- Over phone, ask carer or patient to describe:
  - General appearance
  - Colour of face and lips

**6. Decision and action**
Advise and arrange follow-up, taking account of local capacity

- Likely covid-19 but well, with mild symptoms
  - Self management: fluids, paracetamol
  - Reduce spread of virus - follow current government 'stay at home' advice

- Likely covid-19, unwell, deteriorating
  - Arrange follow up by video, monitor closely if you suspect pneumonia
  - Ambulance protocol (999)

**Clinical characteristics**
Based on 1099 hospitalised patients in Wuhan, China

- Cough
- Temperature ≥38°C
- Temperature ≥38°C
- Temperature ≥38°C
- Fatigue
- Sputum
- Shortness of breath
- Muscle aches
- Sore throat
- Headache
- Chills
- Nasal congestion
- Nausea or vomiting
- Diarrhoea
- Any comorbidity

**Red flags**
- Covid-19:
  - Severe shortness of breath at rest
  - Difficulty breathing
  - Pain or pressure in the chest
  - Cold, clammy, or pale and moistened skin
  - New confusion
  - Blue lips or face
  - Little or no urine output
  - Coughing up blood

* Breaths per minute | Beats per minute | If not available for self monitoring

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