

Handbook for video consultations

Strategies to ensure a safe and
effective consultation for clinicians
working via webcam

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Dr Adam David Abbs MBBS MRCGP PGCCE

Dr Sufian Ali MBChB MRCGP

Dr Maheinthan Yogeswaran MBChB MRCGP

Dr Abby Hyams MBChB DRCOG DFFP MRCGP (Distinction)

Dr Saloni Kapoor MBBS MRCP DRCOG DSFRH MRCGP

Dr Zubair Ahmed MBChB MBA MRCGP

Dr Waseem Mohi MBBS



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Introduction

Video consultations are becoming increasingly prevalent and popular. Patients want easy access to healthcare and doctors want to protect themselves, and patients, from catching infections.

All consultations, face to face or video, need to maintain safety, confidentiality and the patient-doctor relationship. This guide aims to provide clinicians with some guidance on how to modify their usual history taking and examination techniques to enable a productive, safe and satisfying safe consultation.

Whilst many primary care consultations can be undertaken safely remotely, where there is an unacceptable level of uncertainty or risk, a referral to a different setting is required.

We have written this guide using our experience of performing tens of thousands of video consultations over the past few years in the hope that it will help our colleagues get the most out of video consultations.

Setting

This is a novel approach. Reinforce your credentials to reassure the patient that this is a professional consultation. The patient knows you're not necessarily in your usual consultation room, so they need some reassurance that you are someone who they can trust and confide in.

How to dress

- You may be at home, but dress professionally; how you dress dictates how you are perceived
- Solid colours that contrast with the background will allow you to be seen more clearly

Camera position

- Have your face in full view
- Have your face in the centre of the screen
- Have your camera in landscape view if possible, so some background can be seen

Lighting

- Backlighting can often make it hard to see, so any lights or bright windows should be behind the camera. If the light is coming from behind you; the patient will most likely just see a shadow.

Background

- Ideally, your background will be clear, to appear as clinical as possible
- If clear isn't possible, ensure the background looks professional and tidy

Quiet

- Find a private place to ensure that both audio and visual confidentiality can be maintained and ensure you will not be interrupted during a consultation
- Ensure your patient cannot hear other people at your location – especially important if you are working from home

Keyboard

- A noisy keyboard may be distracting for the patient on the phone or webcam.

The consultation

Your eyes

- The patient will feel most engaged with if you look directly at the camera from time to time to make 'camera contact'. Be especially conscious if you have a large screen as whilst you may be looking at the video of the patient; the patient may feel as if you are ignoring them.

Hands

- The patient can't see your hands, so tell them what you're doing: "I'm just writing some notes"
- You can use your hands to point to things on your own body

Reassure

- This technology is new to the patient, so reassure the patient they are doing okay
- Take the blame for any problems and don't have any expectations of patient ability
- Reassure them using a phrase such as: "Don't worry. If something doesn't work, that's my responsibility, not yours"

Initiating the consultation

Establish your credentials

- "My name is Dr Smith. Before we start, can we confirm some details please?"
- Without the usual structure of the initiation of a face to face consultation, the patient is often tempted to jump directly into giving you their presenting complaint

Confirm their details

- At least 3 x patient identifiers should be confirmed at the start of each consultation – name, date of birth and telephone number, for example
- Get their location and keep a record of it if it is different to their address. This is so emergencies can be properly managed.
- Check the telephone number is the one you'll be calling if there's a problem with the video connection

Establish your humanity

- The patient needs to be reassured that, even though this is online, you are still there to help them
- “I realise this may be new to you, but don't worry. I'm here to listen to you and to help you.”
- Empathy isn't conveyed as easily online or over the phone, so you'll need to emphasise your understanding and concern

Audience

- Ask for the names of other people in the room, especially if they are speaking *for* the patient
- Where possible make an attempt at direct communication with the patient; maybe they were just too nervous to try

Privacy

- Ensure that the patient is in a place where they can talk openly

Mark the starting point

- The start of the consultation may feel a little awkward and messy. You've got to confirm details and deal with any technical issues, things that you might not do in a face to face consultation. So, it is important that you mark the start of the actual consultation and reset the tone to a patient-doctor interaction.

During the consultation

Signpost

- This will be new for the patient so let them know what is happening and guide them
- For example: “Now I need to know a bit about your background... what’s your job?”
- Breaking the consultation into blocks also helps to set the pace of the consultation and provide a reassuring structure

Be patient

- There may be problems with technology and with the examination. The more relaxed you are, the more relaxed the patient will be, and the more effective the consultation will be.

Allow them to speak

- Delays in connection give this extra importance. Let the patient finish their story. You will find that just one second of pausing after a patient has finished their sentence will considerably reduce the number of interrupted sentences.

Be kind

- Your patient is possibly alone, certainly far away, probably ill and usually nervous
- They are vulnerable and they are trusting you with their physical and mental health
- Appreciate the honour that this is and show them that you are engaged and empathic
- Remember that they may not be able to see any non-verbal communication below your neckline depending on the positioning of your camera

Ending the consultation

Safety-netting

Even more so than face to face, where it is easier to assess understanding, clear and specific safety netting is absolutely essential. Ensure you cover What, When, Where and How, then Check:

- **WHAT** should prompt them to act – “if your temperature is still above 38 degrees”
- **WHEN** does your advice apply – “in 48 hours from now”
- **WHERE** should they go – “go to the emergency department”
- **HOW** they should get there – “via ambulance”
- **CHECK** – “can you repeat that back to me?”

Consider early presentations

There are some key differences between when a patient presents face to face versus when a patient presents to a remote consultation. Patients attending a remote consultation may be in the very early stages of an illness, when they may appear less unwell, and their symptoms are milder, so it is more difficult to give a definitive diagnosis. The risk inherent in this is that the clinician gains false reassurance from a well-looking patient, and the patient then worsens following the consultation. As such, thorough history taking, examination, and clear safety netting has added importance in remote consultations. Reasons for earlier presentations for remote consultations include:

- Barrier to travel
 - Patients with very mild symptoms might not see the value in taking the time and energy to travel to a face to face consultation, but a remote consultation can be done from their own home.
- Timing
 - Finding a suitable face to face appointment time in a busy schedule can be difficult and can take time, but remote consultations are often available earlier and don't require any travel time, so it is easier to attend remote consultations.

Paediatrics

Social history

A remote consultation is not an incomplete consultation. Extra care must be taken to ensure the safety of the child in a remote consultation, this includes taking a full social history.

- Are the family known to social services?
- Who lives in, and visits, the house?
- What is the reason for a remote, rather than face to face, consultation?
- Has there been a delay in presentation?

General examination

Patient location

Is the patient where you would expect them to be at that time of day? A patient who is in bed at 4pm is likely much more unwell than a patient sat in the lounge at 10pm.

Patient appearance

Another way to assess the severity of illness is the attention the patient has given to their own appearance. Naturally this is considered within the context of the individual. It is reassuring if someone who has taken the time and energy to dress smartly, wash and style their hair, and put on make-up or shave.

Social support

Are there family members present? Is the environment clean and tidy? Are there signs of neglect? Do you think this patient, or their family members, will seek help when appropriate?

Alertness

Is the patient alert and engaging? Or do they appear distant or incoherent?

Pain

Assess if the patient looks comfortable or if there are signs of pain. If there is pain, is it worse on breathing, moving or looking at light? Try to observe the patient as intently as possible. Engaging in casual conversation, making small talk, will enable them to relax; and you'll get a better picture of how much pain they're actually in.

Tools

Does the patient have any examination tools at home, such as a blood pressure cuff, pulse oximeter, thermometer, blood glucose meter or peak flow meter?

Appropriateness

In the same way as a general practitioner is aware of the limitations of assessing and managing in the community, away from specialists and access to investigations, the remote clinician must do the same. Always consider if a remote consultation is appropriate for this person, with this condition, in this situation.

Examples of potentially inappropriate consultations include:

- The patient who has had 2 remote consultations for the same condition that isn't improving
- Where an intimate examination is required
- In patients who cannot use the technology due to age, confusion or impairment
- At-risk patients who may need a consultation outside of their home environment

Paediatrics

Parents

When consulting children, you need to be confident that the parents

- are giving you a complete history,
- can fully understand you,
- and will appropriately act on any safety netting advice

If you cannot be certain of any one of these, refer for a face to face assessment.

Appearance

Is the child well cared for and well-fed? Consider his surroundings also, is it clean?

Undress

You may not know the family and you may have limited information about them, so an extra degree of curiosity is required in order not to miss a child at risk. Asking the parents to undress the child will reveal any marks on the child and will allow you to assess the parental response when being asked to do so.

Low threshold

If you have ANY concerns about a child's safety, physical or social, you must have a LOW threshold for referring the patient for a face to face assessment. Trust your instinct.

Red flags

Consider referring children presenting with any of the following:

- Parental concern
- Multiple comorbidities
- Cold hands and feet
- Reduced urine output
- Not keeping down fluids
- No source for a fever identifiable
- Fits or convulsions
- Clammy, cold, blue, pale or patchy skin
- Non-blanching rash
- Lethargic or difficult to wake

Remote general examination **PLUS**

Some video consultation platforms allow the collection of additional clinical data with diagnostic tools to improve the quality of the consultation and to allow you to manage more consultations remotely.

Ask the patient to use a digital stethoscope so you can:

- listen to their heart assessing rate, rhythm and heart sounds
- listen to their chest for added sounds such as wheeze, stridor and crepitations

Ask the patient to use a pulse oximeter so you can:

- take their oxygen saturations
- take their pulse rate to identify sepsis

Ask the patient to use a blood pressure machine so you can:

- take sitting or standing blood pressure to identify sepsis

Ask the patient to use a thermometer so you can:

- measure body temperature to identify sepsis

Ear, nose and throat examination

Palpation

Ask the patient to palpate their own cervical lymph nodes. They may be able to identify tenderness. Don't forget mastoid tenderness and facial tenderness.

Oropharynx

The patient or a family member may be able to take a photo or show you a video of the back of the patient's throat using a smartphone with a good light.



Risk mitigation - quinsy

To help differentiate between tonsillitis and quinsy, bear in mind that where there is a quinsy:

- Symptoms are more likely to be unilateral
- The patient is likely to experience trismus (inability to open their mouth fully)
- The patient is less likely to feel generally unwell

Be safe

- There is a real risk of a missed quinsy, especially if you cannot get a good view of the throat. Hence, have a low threshold for referring for further examination if a clear view isn't possible
- Strong safety netting advice in a well patient could mitigate the risk of missing a quinsy
- Don't forget to assess dizziness

Fever PAIN score

This scoring system provides some confidence in assessing the need for antibiotics in a patient with possible tonsillitis (strep throat)¹. Give one point for each of the following:

- Fever in last 24 hours
- Purulent tonsils
- Attended rapidly (less than 3 days since the onset of symptoms)
- Inflamed tonsils (severe)
- No cough or coryza

Interpretation

- 0-1 No antibiotics recommended (13-18% likelihood of Strep A)
- 2-3 Delayed antibiotic may be appropriate (34-40% likelihood of Strep A)
- 4-5 Consider immediate or delayed antibiotics (62-65% likelihood of Strep A)

¹ NICE guideline [NG84] Published 26th January 2018

Hum test

To assess patients presenting with ear/hearing symptoms, the Hum test can form a useful part of the remote clinical assessment. Ask the patient to hum their favourite song, or a constant tone for a few seconds; then ask them if it was louder or quieter in the affected ear.

Interpretation

- Louder in the affected ear suggests a conductive deafness, possibly wax or fluid
- Quieter in the affected ear suggests a sensorineural deafness, possibly a pathology in the inner ear or nervous system

Paediatrics

Consider referring children presenting with ENT symptoms and any of the following:

- Discharge from the ear
- Pain so severe that it wakes them up
- Children under 2 with bilateral ear symptoms
- Evidence of mastoid tenderness, redness or swelling
- Loss of balance or dizziness
- Refusing or unable to swallow saliva

Remote ear, nose and throat examination **PLUS**

Some video consultation platforms allow the collection of additional clinical data with diagnostic tools to improve the quality of the consultation and to allow you to manage more consultations remotely.

Ask the patient to use a digital otoscope or Medicam so you can:

- visualise inside of their ears
- look into the back of their throat
- take pictures of any pathology for your records

Cardiovascular and respiratory examination

Do a general assessment. Are they able to give you a history? If not, they are likely too unwell to be assessed remotely (unless that is normal for them).

Observations

Respiratory rate

This can be done on video but not on the telephone. Tell the patient you need them to rest and not talk for 1 minute because *after* that you want to do a test of their breathing. Whilst they are waiting for this test, you will be counting their respiratory rate. This will give a more reliable assessment than telling the patient you are counting their breaths. Asking a family member to do this for them, unless the family member is a healthcare professional, is too unreliable to be of any use clinically.

Heart rate and saturations

Some mobile phones and smart watches may be able to report heart rate and oxygen saturations but bear in mind that these may not be accurate and may not be calibrated. They should be disregarded if the results don't match the clinical picture. Some patients will have their own pulse oximeter.

Pulse taps

Whilst demonstrating (if on camera), ask the patient to put two fingers on their opposite thumb and then slide those two fingers down to where their wrist strap normally is. If they can't feel the pulse after a few seconds, ask them to take some time to feel for a pulse around that area. Once they have found it, ask them to say "tap" each time they feel the pulse. That is all *they* do; *you* will both count the number of "taps" and keep track of the time. If the patient fails to find their pulse, try the same on the inside of the elbow.

Breathing

Consider some screening questions:

- "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?”

Include assessing for decline (this is more concerning than stable breathlessness):

- “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?”

Assess the level of breathlessness:

- Are they breathless at rest?
- Are they able to complete full sentences?
- Are they breathless on exertion?
- Ask the patient to walk upstairs and back again whilst you wait. Assess how breathless they are when they return.

Are there signs of increased work of breathing?

- Look for recessions. Ask them to remove their shirt if possible and appropriate.

Additional notes

- Can you hear a rattling chest, wheeze or stridor? Assess this when assessing respiratory rate, when the patient is quiet.
- Look at how they are sitting, are they leaning forward or avoiding full breaths?

Peripheries

- Skin - is it mottled?
- Hands - are they cold, pale or blue?
- Lips - are they blue or pursed?
- Nostrils - is there any flaring?
- Legs - is there any swelling... uni- or bi-lateral? Are they cold? Are they blue? Is there any redness?

Paediatrics

Consider referring children presenting with respiratory symptoms and any of the following:

- Audible stridor or wheeze
- Any evidence of respiratory distress
- Cold hands and feet
- Reduced urine output
- Known respiratory disease

Respiratory rate

Consider referral for the following respiratory rates, depending on age

- <1 year - >50 breaths/minute
- 1-5 years - >40 breaths/minute
- 6-11 years - >25 breaths/minute
- ≥12 years - >20 breaths/minute

Remote cardiology and respiratory examination **PLUS**

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Ask the patient to use a digital stethoscope so you can:

- listen to their heart assessing rate, rhythm and heart sounds
- listen to their chest for added sounds such as wheeze, stridor and crepitations

Ask the patient to use a pulse oximeter so you can:

- take their oxygen saturations
- take their pulse rate

Ask the patient to use a blood pressure machine so you can:

- take sitting or standing blood pressure

Abdominal examination

Normally, a patient presenting with abdominal symptoms **will** require a physical examination. However, there are times when it is possible to safely undertake a *modified* abdominal examination remotely. Consider current access to healthcare; what is the safest pragmatic option for that patient on that day?

Peritonism

Ask the patient to do a star jump, this includes putting their hands above their head. If they can do this, they are not peritonitic.

Palpation

Ask the patient to palpate their own abdomen, ideally laying down. It is best to split the abdomen into 6 zones, top, middle and bottom, left and right. You will find patients will gravitate to, and localise, tender areas. If they are actively avoiding tender areas, be concerned, this is the self-palpation equivalent of guarding. The renal angle can also be palpated by the patient but ask them to turn around so you can see the area that is being palpated.

Bloating

A *sudden* (less than one week) inability to fasten trousers or skirts, or a change in belt size, is more likely to be bloating than weight gain.

Hernias

Examine for hernias with the patient standing and ask the patient to cough. The sensitivity may be low, but the specificity will be high.

Safety netting

Safety netting has additional importance for patients with abdominal pain. Which conditions *could* develop?

- Ovarian cysts – it will get worse and they will not be able to jump up and down
- Appendicitis – it will move to the right-hand side above their hip
- Pyelonephritis – they will feel generally unwell with vomiting and lower back pain

General red flags

Take extra care for general safety netting for patients presenting with intra-abdominal complaints.

Paediatrics

Consider referring children presenting with abdominal symptoms and any of the following:

- Reduced appetite
- Not keeping fluids down
- Pain on movement or not settling with analgesia
- Pain that wakes them up
- Polyuria, dysuria, urgency or new enuresis
- Weight loss
- Evidence of dehydration
- Reduced urine output

Dermatological examination

Lighting

Ensure you have good lighting. Natural light from windows is better than artificial light.

Measurement

It is difficult to assess the size of something using a webcam. However, you can use a common object as a reference point to act as a ruler. For example, a 1-pound coin is 23mm in diameter.

Angles

Try to get an appreciation of any lesion in all 3 dimensions. Ask for a view of the lesion, both from above, and from the side, so you can assess the projection/height of the lesion.

Palpation

Ask the patient to brush a hand over any lesion, looking for:

- Heat
- Pain
- Texture (smooth or rough)
- Tenderness
- Moistness (wet or dry)

Glass test

Ask the patient to get a wide glass and roll it over any rash. This will assess for blanching.

Paediatrics

Consider referring children presenting with a rash with any of the following features:

- Red lips, tongue or mouth
- Pain, blistering or peeling
- Covering most of the body
- Systemic features such as fever or drowsiness

Remote dermatological examination **PLUS**

Some video consultation platforms allow the collection of additional clinical data with diagnostic tools to improve the quality of the consultation and to allow you to manage more consultations remotely.

Ask the patient to use a digital dermatoscope or Medicam so you can:

- take a closer look at the rash
- take pictures of any rash for your records

Neurological examination

Cranial nerves

- Most cranial nerves can still be examined online. Observe the light reflection on the eyes. It should be the same on each eye, wherever the eyes look. If there is asymmetry, there is a likely deficit and the patient will probably confirm they are experiencing diplopia.
- Temporal tenderness can be assessed by the patient. You will be looking for asymmetry in sensation.
- Don't forget key questions such as painful eye movements and haloes.

Sensation

Patients can use an object to assess light touch. Use something like the edge of a credit card.

Power

Upper limb power can be measured by assessing for palmar drift. The patient can hold this position whilst answering questions. Lower limbs can be measured grossly by asking them to stand on their tiptoes and (safely) stand on one leg.

Coordination

Conduct the 'Finger to nose' test. This can be done by asking the patient to:

- move an arms-length back from the screen
- pick a specific point at the top of the computer screen (use that as the replacement for your finger)

You will be able to see any hesitation. In particular you will be looking for sudden changes in direction, suggesting dysmetria.

Gait

This is easily assessed by asking the patient to walk to the furthest end of the room and back. You may need to move furniture or the location of the camera.

Balance

This can be assessed by observing heel-toe walking.

Cerebellar signs

Dysdiadochokinesia can be assessed as well online as it is in person. Romberg's test can be carried out if there is someone who can steady the chair behind the patient.

Muscle wasting and fasciculations

Where appropriate ask the patient to remove some items of clothing to assess for muscle asymmetry and any fasciculations.

Musculoskeletal examination

Positioning

Ensure the patient is far away enough from the camera for you to fully assess them. Being too close won't allow you to compare left with right.

Function

- Asking the patient to move affected limbs allows you to assess pain and range of movement
- The patient will likely be able to feel any crepitus
- The ability to stand on one leg is a good screen for lower limb fractures as it removes compensations in gait that occur when standing on two legs

Tenderness

Taking the time to identify exactly where it is tender will allow you to make a more accurate diagnosis.

Swelling

Putting both limbs side by side will allow you to assess swelling. For upper limbs a family member can hold the camera. Getting a right-angled view can also help you appreciate the degree of swelling.

Paediatrics

Any child presenting with an injury, as opposed to illness, will need to be referred for face to face assessment. Not only can fractures be very easily missed in children, but potential non-accidental injuries cannot be examined remotely.

About the authors

The authors have collectively managed tens of thousands of video consultations between them. More information on each author can be found at medicspot.co.uk/doctors.

Dr Adam David Abbs MBBS MRCGP PGCCE

Dr Sufian Ali MBChB MRCGP

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Medicspot

With Medicspot, clinicians can take real-time vitals and perform remote examinations using a stethoscope, pulse oximeter, thermometer, Medicam, and sphygmomanometer. This allows clinicians to accurately diagnose, manage and safety-net patients during remote consultations. The easy-to-use Medicspot interface gives clinicians the confidence to maintain their normal standards of care while minimising infection risks.



Learn more about Medicspot contact-free examinations and consultations at medicspot.co.uk/partner/nhs.

Education

Medicspot has developed an online education hub for remote consultations to share best practices in this evolving field of medicine. You can visit this hub at medicspot.co.uk/education.