

# Clinical Skills Teaching and Learning Recommendations

## Online Clinical Skills Teaching and Learning Oversight Group:

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## Overview

This guide is aimed at providing help for anyone facilitating online teaching of clinical skills. In this document, 'clinical skills' are considered in the broadest sense encompassing:

1. Theoretical knowledge
2. Applied knowledge
3. Practical clinical skills

The recommendations presented here will provide a basic starting point for planning and delivering online teaching and are intended to be used in conjunction with other guidelines and requirements that might be specific to the individual teaching programme you are working on. Anyone planning teaching in this area might also find it helpful to refer to the other blended learning tips provided in the [FBMH Online/Blended Learning Delivery Strategy 20-21](#). In particular, recommendations for small group teaching, online assessment, and teaching practical skills online might be especially useful. For example, engaging students and staff is an essential part of teaching clinical skills online and these are covered in the [recommendations for small group teaching](#). Also, the [Faculty E-learning team](#) have prepared a range of resources to assist you in delivering blended learning.

## What is possible when teaching clinical skills online?

With careful planning and preparation, the majority of clinical skills teaching can be done online. Often the initial development of online teaching material can be time consuming as it is not usually possible to directly transfer conventional teaching material to an online format. However, there are many additional advantages of online teaching. Knowing the context of the curriculum in which you are teaching, the assessment criteria, and having appropriate expectations of students' competency will all help to ensure that you can provide successful and high-quality teaching.

- Basic theoretical and applied knowledge are relatively easily adapted to online format. Students need to be engaged through the way information is presented. Providing information in a clear and structured way will help students to work through material and engage with it more meaningfully. Information should be presented in small sections (chunks) using a variety of modalities, including videos, text, and interactive tasks.
- It is helpful to embed the intended learning outcomes (ILO's), key information, references and some form of assessments into the online platform you are using (e.g. Blackboard) to help students navigate through the course and compliment the individual sessions you provide.
- If links are made to external sources, check all hypertext links - many providers update URLs, and links should be checked thoroughly before release to students.

- Practical clinical skills are less easy to manage but key messages can potentially be presented online and through imaginative use of practical demonstration via video. The use of actors and case scenarios is often an excellent way to teach core clinical skills.
- Any skill which can be demonstrated successfully with a mannequin or volunteer can be taught in an on-line format.
- The teaching can be synchronous or asynchronous. Be aware that commonly used approaches to skills training are likely to require adaptations in order to be applicable to online teaching. For example, Peyton's 4-Steps-Approach is a common method of skill training, and details on how this might be adapted are provided below in point 3.
- With the current COVID pandemic, be aware that any demonstrations must be compliant with current Public Health England guidelines (e.g. appropriate PPE and/or social distancing).

## 1. Plan ahead:

Ahead of teaching, plan each session so you know exactly what equipment you will need to include and what the key learning outcomes are. Also consider accreditation requirements by relevant professional and regulatory bodies to be sure that what you are planning is in accordance with these.

Make a note of all the equipment needed for each session including any extra for spares. Create a list of any equipment required for each teaching session, and if helpful, use an excel spreadsheet to organise it so you can get a summary output as well as a breakdown for each session (excel can also be programmed to send you email reminders and/or notifications of when to order equipment).

In advance, familiarise yourself with the potential options for online platforms that will enable you to conduct live sessions online. There are many software tools, each offering different features; some platforms offer break-out rooms, for example. Be aware that many NHS Trusts might not permit use of some online platforms, such as 'Zoom', so check this first. Online platforms for delivering live sessions with students, available through the University, include Blackboard Collaborate Ultra (this sits within Blackboard, which is the main platform used across the University to facilitate blended learning)

There are numerous platforms available that you might consider using and some potential options are listed below in the resources section. There are many training and development opportunities available associated with the various programmes; for example, [PRIME](#) offer workshops to all current educators on the MBChB Programme. The University [staffnet](#) and the [FMBH website](#) also have some excellent resources for online learning which might be worth looking at as a starting point.

When planning the teaching session, ensure you have the means to [ensure your environment](#) is well lit, that the camera and microphone being used work properly and give good sound and vision quality. Ensure that there are no distracting or inappropriate items or images in the background (a green screen may be useful here). Ensure that there is a good internet connection if this is to be a live session.

- Consider ILOs. For each ILO, consider how it might best be delivered. A different approach may be needed for individual ILOs that might previously have been taught together.
- Review current material. Liaise with other members of your teaching team; this might be a good opportunity to rationalise.
- Is there any suitable material already available?
- Consider what approaches have been taken by other institutions.
- Consider how to categorise online material making sure that it is accessible to students and logically presented. Make sure you address the needs of all students (including those who may require reasonable adjustments supported by DASS recommendations).
- Decide if material can be delivered to a large cohort or is better in small groups.

- Decide if material is better delivered live or pre-recorded with Q and A's.
- Refresh any supporting literature.

## 2. Practice first:

If you are facilitating live online sessions to teach clinical skills, liaise with your colleagues first to arrange to practise. Even if this is not the first time you have provided online teaching, it can be useful to meet with colleagues to start off with and teach each other as a rehearsal. This will enable you to learn the functionality of your online platform (Blackboard Collaborate Ultra, Zoom, Microsoft teams etc.) and identify any areas where you might need to adapt lesson plans, learning outcomes, and help you plan how to structure and time things and check you have the relevant resources for a virtual platform.

## 3. Clarify expectations of students before, during and after:

Be very clear on what is required from students both before a live teaching session, during and then afterwards. It is important that students know exactly what is expected of them during sessions, including whether they need to have their video on, what the ground rules are for participation (including confidentiality etc.), and whether they need any equipment or to have read or prepared anything). Give very specific instructions to students about the expectations of them for participating in sessions and also the restrictions on any sharing of recordings and information. Also clarify limitations of practicing with family or other household members and make it clear what further practice and follow-up actions might be required.

Define for a live audience when you will want to take questions and how you will facilitate the group. Remember that whilst demonstrating you may well have audio only from your audience, as a screen may be too small or distant to see. So, raising hands directly or virtually will not be a useful way for students to gain your attention unless you have a dedicated facilitator. You may wish to punctuate your demonstration with opportunities for students to ask for clarification and/ or feedback. Please also bear in mind that the sessions and related materials will need to be made available for those students who, for legitimate reasons, are unable to attend.

At the end of the session be clear about the outcomes for the students and instructions for any further work needed. For example, a simple skill may be taught in the online format and the student can then consider themselves ready for future assessment or clinical use of the skill, whereas many more complicated skills will require further clinically supervised practice before they are ready for assessment or performing on real patients. If more practise is needed, signpost students towards when and how this can be achieved.

- Ensure you have a quiet teaching space, no windows behind you, firm surface for your webcam and good internet connection.
- Start the session a couple of minutes early to allow everyone to meet and join in good time.
- Remind participants of the ground rules, which should usually include all students and tutors having their video and microphones turned on throughout the session.
- Consider having someone (student volunteer or colleague) to monitor the chat function/raise questions with you, as it can be difficult to facilitate the group, run the session to time and see all questions.

## 4. Utilise team working

It can be more difficult to teach practical and clinical skills online by yourself, in part due to having to manage the webinar/online interface and any live chat that might be happening. It is worth discussing this with your colleagues to explore any potential for working together and assisting each other.

Alternatively, consider using other students to help take a lead on running groups. This might also be a good way of engaging students more in the sessions.

Consider basing the structure of your teaching sessions on Peytons '4 stage approach' ([Münster et al., 2016](#)), which has been adapted by [Khan \(2020\)](#) specifically for remote teaching of clinical skills. These adaptations have been made more recently to facilitate the move to online learning during the COVID outbreak and thus require further evaluation. However, in relation to blended learning, if adaptations are not made, this could impact on learning if not done "live" in front of the learners. Therefore, Khan (2020) has outlined the following procedures:

1. DEMONSTRATION: Demonstration of skill with video, at normal speed without any comments
2. DISCUSSION: Discussion of skill with teacher, augmented with multiple short video clips
3. COMPREHENSION: Narration of skill by students, with help from other students
4. CONSOLIDATION: Q&A and clinical contextualization

This adaptation preserves the most important aspects of the '4 stage process' within the restrictions of online/ remote set-up. Alternatively, it is possible to replace the 4-stage approach with an online forum where questions or comments can be encouraged, giving a time limit for participation (to prevent tutors from getting tied in answering questions over a prolonged time period).

## 5. Get creative:

There is a wealth of substitute props you can potentially use when teaching so get as creative as you can! For example, different fruits, vegetables and other household goods can be used to help demonstrate practical clinical skills online. Ideas could include anything from students injecting oranges, suturing bananas, catheterising cucumbers to performing CPR on sponges!

Using expert patients, actors and real examples online can be an excellent way to provide demonstrations and engage students. There are numerous recommendations for online resources provided in the second half of this document. When doing demonstrations, whether they are live or pre-recorded, issues of consent need careful consideration first.

You will need to check the security restrictions of the online platforms you use to ensure that you protect the [privacy](#) of all contributors and ensure that you are GDPR compliant. Check with the [Faculty E-Learning team](#) for information on the security of platforms you intend to use, such as [zoom](#).

## Using expert Patients

There are 4 key principles that should be followed when using expert patients in a live online setting:

1. The privacy of the patient is a paramount
2. The patient must have given prior written informed consent
3. The identity of the patient must be hidden (e.g. change name online to 'expert patient', turn video off)
4. Any material produced must not be circulated for general distribution

## Using actors in online teaching

Many courses within the Faculty already successfully use actors for demonstrations and OSCE assessments. You might want to consider using actors to assist with teaching clinical skills online and if so, do ask colleagues about existing contacts as having actors with experience of working in training contexts related to healthcare can be beneficial. Be aware of cost implications and consider using colleagues and your team to demonstrate for the purposes of your teaching session.

Creating videos and live demonstration resources is also something to consider. You might wish to contact the [e-learning](#) teams for help and also to ask about existing [video training resources](#). Do check what existing resources there are; for example, the PRiME team, who may be able to help design medical online teaching resources (email [mbchb.prime@manchester.ac.uk](mailto:mbchb.prime@manchester.ac.uk)). For clinical skills in the area of mental health, there is an existing [online resource bank of DVDs](#) available by contacting [Nick Jordan](#), based at the MRI Rawnsley Building ([nick.jordan@manchester.ac.uk](mailto:nick.jordan@manchester.ac.uk)).

There are also clinical skills tutors working with Manchester Medical School at the 4 hospital sites who can help with organising skills teaching (Nick Smith at MFT ([nick.smith@cmft.nhs.uk](mailto:nick.smith@cmft.nhs.uk)), Lesley Wood at Wythenshawe ([Lesley.wood@manchester.ac.uk](mailto:Lesley.wood@manchester.ac.uk)), Nicola Hubbard at Salford Royal ([Nicola.hubbard@srft.nhs.uk](mailto:Nicola.hubbard@srft.nhs.uk)), and Aidan Blunt at Lancashire Teaching Hospitals ([aidan.blunt@lthtr.nhs.uk](mailto:aidan.blunt@lthtr.nhs.uk)).

## 6. Engaging, and accommodating students' needs

Ensuring that sessions accommodate the needs of all students, particularly those students who may require reasonable adjustments for disability purposes, is a legal requirement. Online teaching and learning has potential to be more flexible than face-to-face events for implementing adjustments. For example, sessions can be recorded for students to revisit at their convenience, a transcript of the session or subtitles can be produced and during live sessions, students can type questions using webinar chat or instant messaging function. Zoom offers an auto-captioning facility which can be enabled before recording takes place; the Faculty offers advice on this on the [Technology Enhanced Learning and Design webpage](#). Video recordings can also be overlaid with text using [OpenShot](#) video editor, which again, the Faculty has [guidance](#) for.

Students are additionally able to make their own home computing adjustments e.g. screen resolution, volume, positioning of computing equipment. [The Disability Advisory and Support Service \(DASS\)](#) can advise individual students on assistive software and equipment to enhance their learning experience.

It would be helpful if educators remain mindful of the volume of online teaching on clinical skills, in the context of other online learning that the students are committed to.

## 7. Clinical skills assessments:

Assessing clinical skills at a distance will also need careful planning and the [FMBH Online/Blended Delivery Strategy 20-21](#) provides some very helpful recommendations which will be updated by the assessment oversight group. All the recommendations and resources provided in the current document can also be used to help you consider the suitability and feasibility of assessment methods. Some practical skills simply cannot be assessed online using accepted methods so it might be necessary to make some alterations to the weighting of skills in the programme. Also, do consider liaison with professional bodies who might be able to provide further guidance.

OSCEs were developed as a means of assessing clinical competency based on objective testing through direct clinical observation. Assessment processes may include a range of options, including interpretation of data, problem solving, communication skills, and seeking information from a patient. Many of these will still be possible online and might lend themselves well to the use of additional resources such as the use of actors (see point 4. regarding the use of actors).

There is evidence that online clinical examinations appear to be successful and there can be many advantages. These need careful planning so it will be helpful to discuss this with colleagues who may already have run online assessments. Colleagues with experience in this area include: [Harish.Thampy@manchester.ac.uk](mailto:Harish.Thampy@manchester.ac.uk)

## Resources

### Online platforms for delivery of clinical skills sessions

A link to the FBM information regarding different platforms for online learning can be found here: <https://elearning.bmh.manchester.ac.uk/training/digital-teaching-showcase/>

Additionally, here are some options (not an exhaustive list) for online platforms that can be used for delivering clinical skills sessions:

- Attend anywhere (NHS Attend Anywhere is a secure web-based platform for patients with pre-arranged video consultation appointments - <https://www.attendanywhere.org.uk/>. Attend anywhere is considered secure by multiple NHS Trusts.
- 1Med (<https://www.onemed.manchester.ac.uk/>)
- Zoom - <https://www.videoconference.manchester.ac.uk/zoom/> (Please note that some NHS Trusts are working on enabling this to be used on designated computers so please liaise with your Trust contacts in advance to ensure the feasibility of using this platform). The University of Manchester can provide you with full access to Zoom which enables the use of all features.
- Prime - Professionals in the Medical Education team offer training workshops and may be able to help design medical online teaching resources ([mbchb.prime@manchester.ac.uk](mailto:mbchb.prime@manchester.ac.uk))
- Blackboard collaborate ultra - <http://documents.manchester.ac.uk/DocuInfo.aspx?DocID=48517>
- Microsoft teams - <https://www.staffnet.manchester.ac.uk/modernising-it/technology/office365/resources/>

### Consultation skills resources

The Centre for Pharmacy Postgraduate Education (CPPE, who are based at the University of Manchester) offer a 3-hour elearning video-based package on consultation skills. "Clinical History Taking; what a good consultation looks like" can be accessed by opening a free-of-charge account with CPPE. <https://www.cppe.ac.uk/programmes/l/consult-e-00/>

Elearning for Health (eLfh) offer a 2-hour elearning package on helping patients make informed decisions: <https://portal.e-lfh.org.uk/Component/Details/543267>

NHS England have a useful slideset on the Situation, Background, Assessment, Recommendation (SBAR) technique. <https://www.england.nhs.uk/signuptosafety/wp-content/uploads/sites/16/2015/09/safe-comms-design-implmnt-meas.pdf>

International association for communication in healthcare (EACH) have created a 'top tips' for delivering communication skills teaching online and working with actors (Simulated patients). There are other resources freely available on their website for teaching communication skills.

<https://www.each.eu/wp-content/uploads/2020/05/Top-Tips-for-Delivering-Communication-Skills-Teaching-Online-TEACHERS.pdf>

Skills for Health. Source of frameworks for working with different populations/different contexts.

<https://www.skillsforhealth.org.uk/services/item/146-core-skills-training-framework>

### Clinical examination skills resources

The Geeky medics website contains video content modelling a very wide range of examination skills, predominantly presented as OSCE guides. <https://geekymedics.com/category/osce/clinical-examination/>

Liverpool medical school clinical skills have a library of study guides for all clinical skills.

<https://liverpoolclinicalskills.com/>

Manchester Foundation Trust UG youtube channel for examination and procedural skills.

<https://www.youtube.com/user/CMFTUGME/videos>

Oxford Medical Education youtube channel for examination and clinical skills.

<https://www.youtube.com/user/OxfordMedicalVideos/videos>

St Georges University, London - online resources for clinical skills.

<https://www.youtube.com/user/sgulcso>

University of Leeds-online e-book, with videos, for clinical skills.

[http://clinicalskills.leeds.ac.uk/cs\\_ebook/index.html](http://clinicalskills.leeds.ac.uk/cs_ebook/index.html)

### Clinical assessment skills resources

The RCN has web-based content on basic observations for HCAs (inc temp, BP, O2, urinalysis etc).

<https://rcni.com/hosted-content/rcn/first-steps/clinical-skills>

The UoM Advanced Community Pharmacy Practice PGT programme developed an elearning package on vital signs and NEWS2 available at:

<https://manchester.ispringcloud.eu/acc/EEqPlqMxOTE/s/191-ojGfx-PcYih-BDTd4>