Teaching Exchange:

Clinical Placements in General Practice – concepts and considerations of implementing remote virtual placements in the COVID world

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Abstract

Medical students are considered as 'essential workers' within the National Health Service (NHS) and the delivery of clinical experience is essential to their learning and progression into the workforce. The COVID-19 pandemic impacted on the delivery of clinical placements in Primary care; GPs are currently delivering the majority of consultations using telephone or video methods and difficulties in attaining placement experience are being encountered by medical students. Virtual remote consultations are an appropriate adjunct to conventional face-to-face patient encounters and could facilitate students to attain core learning outcomes. This article describes some of the approaches that enable remote (home) virtual patient encounters in Primary Care for medical students. These are categorised as methods that a) enable remote access into GP clinical systems, b) enable remote access into individual patient consultations and c) enable an observational only experience. Key considerations are highlighted to enable safe and effective implementation of remote virtual consultations, along with the advantages and disadvantages of each method. These include patient consent, confidentiality, data sharing and protection, professionalism, student agreements and data gathering templates. It is hoped that sharing of these methods of virtual consulting will support ongoing delivery of Primary Care education across medical schools.

Introduction

The Coronavirus Disease (COVID-19) pandemic halted the delivery of undergraduate medical education in March 2020. Medical schools were tasked to rapidly modify existing methods of teaching to ensure medical students were able to safely progress in their studies. Clinical placements were suspended and the primary focus of attention was to migrate teaching to online platforms.[1] The new academic year recommenced around September 2020 and with this came the resumption of clinical placements.

Notwithstanding the impacts of the COVID-19 pandemic, it is of paramount importance that clinical placements in General Practice continue. The Medical Schools Council (MSC) announced that medical students should be regarded as 'essential' workers and their progression is pivotal for succession of the medical workforce.[2] The Royal College of General Practitioners (RCGP)/Society for Academic Primary Care (SAPC) recommend that students spend at least 25% of their curricular activity within Primary Care;[3] before COVID-19 the mean proportion of curriculum time spent in Primary Care across United Kingdom (UK) medical schools was around 10%.[4] Attrition of this already limited experience could have negative consequences for General Practice (GP); evidence suggests positive experiences and role modelling in Primary Care are the most influential factors for students choosing careers in GP.[5-7] Ongoing support to continue this experience, let alone expand it, is therefore of great importance.

The University of Nottingham (UoN) is one of the largest medical schools in the UK; across senior clinical placements (years 4 and 5) there are around 700 students, each spending four weeks in GP. The Division of Primary Care's Primary Care Education Unit (PCEU) is responsible for building capacity, implementing and quality assuring all clinical placements in GP. Recommencement of placements in September 2020 posed many challenges for the PCEU, such as maintaining student clinical experience in the context of social distancing and/or self-isolation legislation. However, with such challenges came the opportunity to review existing methods of placement delivery and align these to current working behaviours in GP, such as using remote virtual consultations.

This article provides a summary of experiences and challenges posed when delivering clinical placements in GP during the COVID-19 pandemic, and a description of our models developed to enable continued placement delivery using remote virtual consulting.

Clinical experience in GP

During each four week placement in GP, students predominately spend their time in GP practices undertaking patient consultations, developing clinical skills and undertake quality improvement activities. The primary intent was to provide students with the same clinical experiences as before COVID-19 with students spending their time at GP practices.

The challenges

Three broad themes of COVID-19 specific problems were encountered when placements recommenced. Each problem posed different challenges and had the potential to compromise placement experience, attainment of learning outcomes and/or clinical progression. Problems were categorised as:

- Practice problem(s): Lack of staffing due to COVID-19 and/or practice reluctance to host students (due to risk of COVID-19 transmission to staff in the context of high student rates of infection).
- Supervisor problem(s): GP tutor unable to supervise students as self-isolating due to COVID-19 infection or potential exposure.
- Student problem(s): Students unable to attend placement as self-isolating due to COVID-19 infection or potential exposure.

Students were at risk of having their placement(s) cancelled or missing up to two weeks (50%) of experience due to tutor/student self-isolation.

Migration to remote virtual consultations

The PCEU prepared to support placement experiences by facilitating practices to use remote virtual consulting, where appropriate. For the purpose of this article, the term 'remote' has been used to denote students consulting from their home residence and not virtually consulting with patients from an NHS building. Implementation of remote virtual consulting

was implemented after release of the MSC guidance: *Students attending remote consultations, October 2020.*[8]

Model for placement delivery

The model (Figure 1) for delivering virtual placements was derived through consensus discussions between team members of the PCEU. These were also informed by discussions within the RCGP/SAPC Heads of Teaching (HoT) group, which the lead author (JT) is a member.

Key considerations for implementing remote virtual consultations

The MSC provided guidance about implementing remote virtual consultations.[8] Key considerations are summarised as:

1. Patient consent.
2. Confidentiality.
3. Data protection.
4. Professionalism within a remote virtual clinic.

Each of these items are considered, where appropriate, in the following sections that outline steps to consider when implementing remote virtual clinics.

Preparation for GP placement

Whilst inevitable that disruption to placement experience would occur for some students, this was often unpredictable. Smooth transition of students into clinical placements relied upon timely pre-attachment communication between the host practice and student. In anticipation of enabling a remote virtual clinic experience, students were asked to provide their personal details to practices early to enable access to GP clinical systems (e.g. smart card details). It was also advantageous for practices to create students with an nhs.net email address, to allow for secure communication between practice and student in the event of needing to consult remotely. For example, this email would provide greater security for transmission of information such as patient lists. Students were also asked to complete online learning for data protection and provide their certificate of completion to the placement provider; the MSC recommends the E-Learning for Health Data Security Awareness

Programme (https://www.e-lfh.org.uk/programmes/data-security-awareness/). Finally, students were asked to sign a remote virtual consulting agreement (figure 2) to ensure they were aware of the expected requirements to ensure safe and effective remote virtual consultations.

Identification of COVID-19 problems during a placement

Systems needed to be in place that enabled early identification and reporting of problems relating to COVID-19. Link personnel within the PCEU team were identified to be the main point of contact to facilitate swift, triangulated discussions between the Higher Education Institute (HEI), host practice and student(s). Establishing early which learning outcomes had been achieved and those at risk of being unmet was central to planning of placement reconfiguration. For students where a lack of experience consulting with patients was identified, remote virtual consultations were deemed an appropriate secondary measure to enable continued learning experiences. GPs are predominately consulting using virtual (telephone or video) methods, both within NHS buildings and at home where required, and mirroring such activity with students exposes them to current practices within the healthcare system.[9, 10] Moreover, it is conceivable that virtual consulting will continue supporting long-term delivery of patient care. Nearly 70% of all GP consultations are still being undertaken using these methods.[9] Therefore providing students with experience of these consultation methods will help prepare them for future practice.

Methods of remote virtual consulting

A variety of options exist to enable remote virtual consultations and/or clinics to occur. These include:

- Methods that enable remote access into GP clinical systems.
- Methods that enable remote access into individual patient consultations.
- Methods that provide an observational only experience.

Methods that enable remote access into GP clinical systems

Many GP practices have own laptops that are NHS approved and secure. These are provided and supported by local Health Informatics Services. These devices operate through Virtual Private Networks (VPNs), enable healthcare professionals to directly access GP clinical

systems and have the same functionality as working within NHS premises. GP practices can explore with local Health Informatics teams about providing students with secure access to these devices for remote virtual consultations. Alternatively, students could access GP clinical systems using remote desktop software from their personal devices and local Health Informatics teams can facilitate this where available. The advantages of these methods include allowing students to securely access GP clinical systems from a remote environment to enable virtual consultations in the same way as if a student were consulting virtually from a GP practice, thus having the greatest fidelity to the original placement experience.

Methods that enable remote access into individual patient consultations

GP practices have been using applications in parallel within clinical systems throughout the COVID-19 pandemic, such as AccuRx, and students can be provided with access to these consultation platforms. Access can be provided using an nhs.net email this could also be used to share links set up for virtual patient consultations. For additional security, students could use secure devices (e.g. laptops/tablets) loaned by HEIs laptops for these consultations. There is also the option for students to undertake telephone consultations, using either a professional or personal mobile phone, providing all personal identifier settings are switched off.

Students would have the opportunity to observe and/or undertake consultations independently using these consultation/telephone platforms, with or without supervisor presence, thus gaining clinical experience. However, disadvantages include students being unable to see or add to patient records, action tasks (such as prescribing) and there would be a greater time requirement to set up the clinics than methods enabling direct access into clinical systems.

Methods that provide an observational only experience

In September 2020, the MSC and RCGP/SAPC Heads of Teaching launched Virtual Primary Care (VPC) (https://vpc.medicalschoolscouncil.org.uk/).[11] This provides around 150 videos of real-life authentic GP consultations that are mapped to the General Medical Council (GMC) Outcomes for Graduates [12] and the RGGP/SAPC Teaching General Practice curricula.[3] The videos provide educational prompts for key learning opportunities and signpost students to resources about the observed content. VPC enables students and GP tutors to access an

abundance of GP consultations that aim to replicate an observed clinic experience. VPC however is not intended to replace clinical experience gained from direct patient interactions but may be an advantageous supplement to placements when no alternative experience exists.

Other considerations

There are a number of practical considerations when implementing remote virtual placements within Primary Care:

- Consent: All remote virtual consultations require patient consent. Verbal consent taken at the time of booking an appointment and initiation of the consultation is sufficient. However, recording of consultations, whether audio or video, would require explicit written patient consent. The MSC provides a template (figure 3) for dialogue that could be used to obtain verbal consent.

- WiFi and security: Students are required to ensure access to secure WiFi networks for remote virtual clinics. These may be VPNs or password protected personal WiFi networks. Use of unsecured public networks is not permitted.

- Location of remote virtual clinics: Students are expected to undertake consultations within a private space, such as a separate room to others within a household/residence. Doors should be kept closed and headphones worn to avoid overhearing of patient conversations by third parties.

- Debrief and patient safety: Debrief of patient encounters should occur as usually expected. For same day appointments this would usually be after every consultation but may occur at the end of a clinic when stable patients with long-term conditions are reviewed. Supervisors may consider using an additional virtual space to enable student-supervisor discussions during consultations.[13]

- Professionalism: Students are should dress, act and behave in a professional manner as they would usually be expected. The background of virtual clinics should be blurred/neutral so it is not distracting. Students can take notes but recording patient identifiable data is prohibited. Where notes are taken students could use a template to help structure consultations (figure 4).
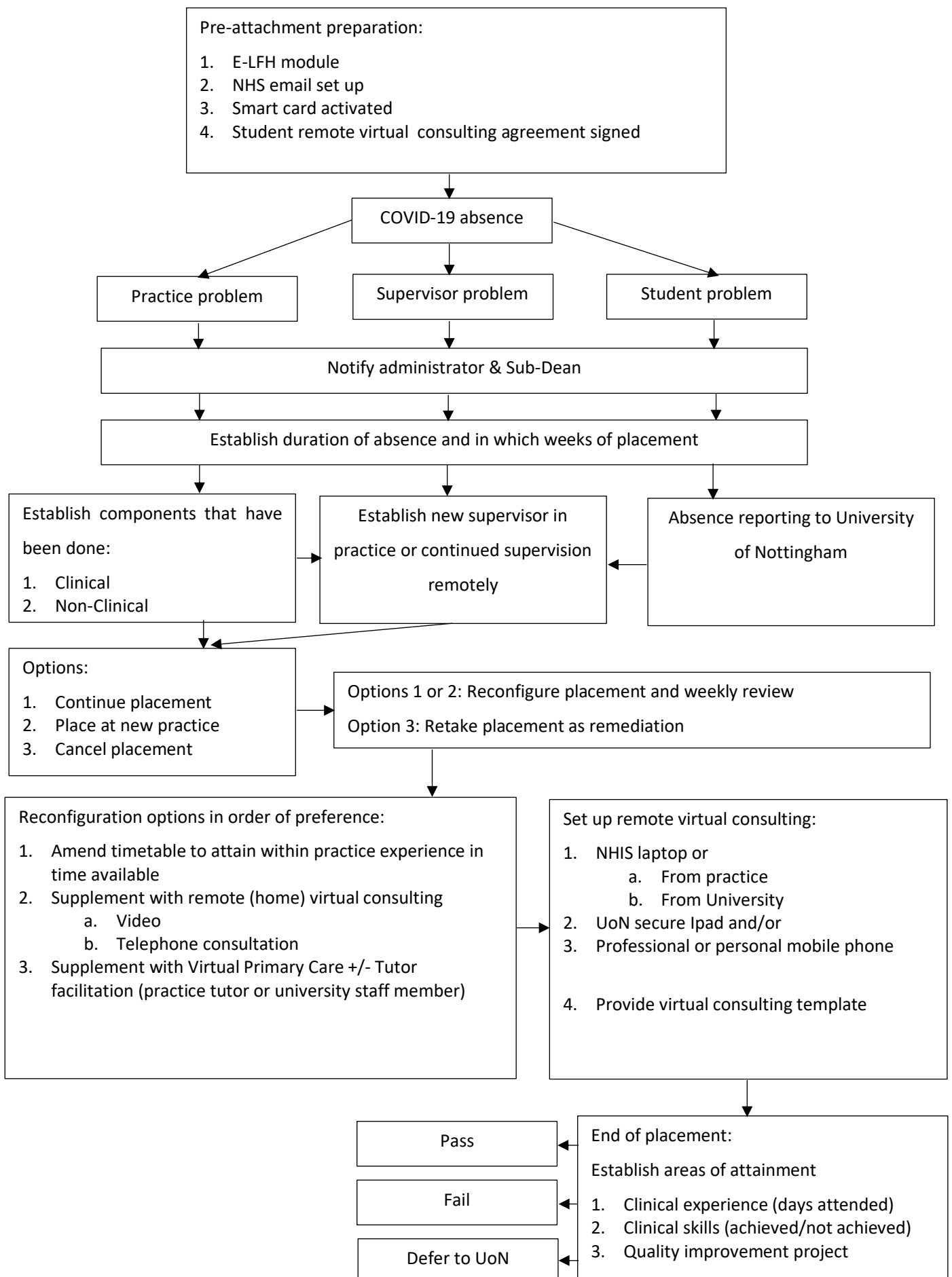
Conclusion

The COVID-19 pandemic has significantly impacted on the delivery of clinical placements in Primary Care; remote virtual consulting may be used as an adjunct for provision of medical student clinical experiences. A number of methods exist to help facilitate remote virtual clinics and there are a number of considerations to enable safe and effective virtual consultations. These include patient consent, confidentiality, data sharing and professionalism within virtual consultations. Student agreements and virtual consultation templates can be used to safeguard the student experience. Methods that could be used to facilitate virtual consultations include those that a) enable remote access into GP clinical systems, b) enable remote access into individual patient consultations and c) enable an observational only experience. These methods have been shared within this article, along with the factors to consider when implementing them, with the vision of supporting other medical schools to provide undergraduates with clinical experience. Further evaluation and iterative refinement of models is required to ensure the approaches to virtual consultations remain adequate for clinical learning.

Figure 1: Delivery of Primary Care placements during COVID-19

Pre-attachment preparation:

1. E-LFH module
2. NHS email set up
3. Smart card activated
4. Student remote virtual consulting agreement signed

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COVID-19 absence

Practice problem | Supervisor problem | Student problem

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Notify administrator & Sub-Dean

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Establish duration of absence and in which weeks of placement

↓

Establish components that have been done:

1. Clinical
2. Non-Clinical

Establish new supervisor in practice or continued supervision remotely

Absence reporting to University of Nottingham

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Options:

1. Continue placement
2. Place at new practice
3. Cancel placement

→

Options 1 or 2: Reconfigure placement and weekly review

Option 3: Retake placement as remediation

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Reconfiguration options in order of preference:

1. Amend timetable to attain within practice experience in time available
2. Supplement with remote (home) virtual consulting
   a. Video
   b. Telephone consultation
3. Supplement with Virtual Primary Care +/- Tutor facilitation (practice tutor or university staff member)

→

Set up remote virtual consulting:

1. NHIS laptop or
   a. From practice
   b. From University
2. UoN secure Ipad and/or
3. Professional or personal mobile phone

4. Provide virtual consulting template

↓

Pass

Fail

Defer to UoN

←

End of placement:

Establish areas of attainment

1. Clinical experience (days attended)
2. Clinical skills (achieved/not achieved)
3. Quality improvement project

Figure 2: Example student Remote Virtual Consulting Agreement

Dear student,

You have been invited to attend a GP clinic virtually and this may include video and/or telephone consultations. These will form an important part of your learning this year and will increasingly form part of a doctor's usual practice and so it is important that you are able to attend and make use of these learning events.

In order for this to occur certain conditions need to be met. Please review the list of requirements/conditions below and sign the agreement prior to attendance. Please check that you have all the required equipment and it is in working order ahead of your clinic date and that you are able to meet the requirements below. This may include undertaking a test call if required.

Prior to undertaking any virtual consultations you must have undertaken the E-Learning for Health module for data security and have a certificate of completion.

You will need your NHIS provided laptop or University of Nottingham iPad/laptop to access video consultations – you may only use these devices to attend video consultations unless express permission has been given by the supervising clinician to use an alternative device. For telephone consultations you are permitted to use your personal telephone / mobile phone but must ensure your caller identification is set to OFF.

You must have installed the latest system updates to prevent unauthorised eavesdropping and must not have installed any apps from an unknown/untrusted source on your device for video consultations.

You will require stable internet/WiFi connection - you will use data when you are on the call. The WiFi network must be secure and password protected. The use of public networks in airports, restaurants, cafes, libraries and/or shops is not permitted.

You are required to take reasonable measures to ensure that the space you are using to attend clinic remotely is private and avoid inadvertent disclosure of information. Any breaches of patient confidentiality will be taken seriously. These measures include the following:

- Undertake the clinic in a quiet, private location. Clinics cannot be undertaken in public or outdoor spaces.

- You should wear headphones to avoid patients being overheard.

- No aspect of the clinic may be digitally recorded by you. You must not take any screenshots, recordings or pictures during the clinic. Again, any breaches of patient confidentiality will be taken seriously.

- Mobile phone usage is not permitted during the clinic unless you have been given express permission to do so by the supervising clinician.

- You must not disclose or discuss personal identifiable information about patients on social media or by private means with a third party e.g. through WhatsApp.

- Personal notes relating to learning sessions must not include identifiable patient data.

- Dress code – professional attire must be worn in accordance with University of Nottingham guidelines for attending clinical placements. This is a GP clinic so you should dress fully (top and bottom) as you would if attending in person. Crumpled/creased clothing will be visible to the clinician and patient.

- You will be using your webcam and your background will be visible to the clinician and patient. Please ensure that anything visible in the background is appropriate for a patient-facing encounter. Consider a plain background without personal effects.

The clinician may refuse you entry to the clinic if they feel that you are not in a suitably private space, if the quality of the video connection is not adequate, or if they have any concerns over potential breaches of patient confidentiality or professionalism including how you are dressed, the background visible and any background noise. Please understand that this will be done in the patient's best interests.

For the duration of the clinic you must assume you are in a working in a professional capacity in the GP environment and not at home. You must be focused entirely on the clinic and behave as you would if attending in person.

Please sign below to document your agreement.

Name:

Signature:

Date:

Figure 3: Medical Schools Council template for gaining consent for remote consultations

"Mr / MS XXXXX (name) – This clinic today is a teaching clinic in which

I am teaching and training a medical student from the University of Nottingham. This consultation can be streamed simultaneously to the medical student(s) and will be very helpful for their learning. All of the consultation will remain confidential as normal and the medical student is also bound by this confidentiality. In addition, this consultation will not be recorded.

Mr/Ms XXXX (name) – Are you happy to confirm that you are willing to allow the student(s) to take part in this online consultation?"

Figure 4: Example template for recording notes of remote virtual consultation

Context	Guidance	Responses
Introduction	Introduce yourself and explain your role	
	Confirm the name and date of birth of the patient – ideally ensure you are talking to the patient	
	Make sure the patient is aware of the confidentiality of the consultation	
Gathering information	Establish the reason for the telephone/video call	
	Listen to the patient, and try to note down any auditory or visual clues e.g. anxiety, anger, visual mismatch (person says they are not worried but clearly displays the opposite)	
	Let the patient talk uninterrupted to gain as much information as possible initially	
	Ask open questions initially, exploring the patient's ideas, concerns and expectations	

	Ask for details about past medical history, medication, and previous treatment	
Ascertaining the clinical problem	Start to focus the questions more to gain more information about the presenting problem	
	Start to use more closed questions to enable more focus on the presenting problem	
	If using a video call – try to visual (if appropriate) the physical area of concern e.g. try to look at patient's throat, or rash for example	
	Perform a mental state examination and PHQ-9 if the patient is presenting with mental health issues	
Consideration of management plan	Try to consider the differential diagnosis of what the problems might be but explain to the patient that your mentor will be following up with a further call	

	Consider whether the patient is going to require a face-to-face appointment to enable a physical examination to take place – for example, an abdominal examination	
Consultation closure	Summarise the consultation with the patient and ensure that the information gained is correct	
	Ensure the patient is aware that they will receive a further call from a clinician to further discuss the clinical problem	
	Safety-net – ensure the patient is aware that they can ring the surgery if the problem worsens	
Issues to discuss with your mentor	Document the consultation thoroughly then discuss the consultation with your mentor, discussing differential diagnoses and potential treatment options. Consider how well the consultation progressed	
Questions	List any questions or clinical queries you have about the consultation	

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