

Fifteen-minute consultation: How to undertake an effective video consultation for children, young people and their families

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ABSTRACT

The COVID-19 pandemic has changed how we work in paediatrics with increasing use of virtual consultations. When optimised, a great deal can be achieved through video consultation compared with telephone, but accessibility and clinical risk need to be carefully considered and managed. This article aims to provide a structured approach with top tips for planning and delivering video consultations effectively in paediatrics.

INTRODUCTION

The national response to the COVID-19 pandemic has resulted in health services cancelling non-urgent face-to-face outpatient activity. As advised by the Royal College of Paediatrics and Child Health,¹ virtual consultations should be used wherever possible in place of face-to-face meetings to reduce transmission of

Box 1 Experience from an inner city community paediatrics department

Our paediatric service serves an inner city population of approximately 70 000 children and young people, with great diversity (46% of borough population identify as black, Asian or minority ethnicity), high rates of poverty (23% of school pupils eligible for free school meals) and high proportions of looked after children in local authority care (70 per 10 000 children) and children subject to child protection plans (50 per 10 000).

From early 2020, we had been designated a pilot service for the use of the Attend Anywhere video-consultation platform. Between the end of March 2020 and the beginning of June 2020, paediatricians used the Attend Anywhere platform (<https://www.attendanywhere.com/>) for over 250 community paediatric clinics.

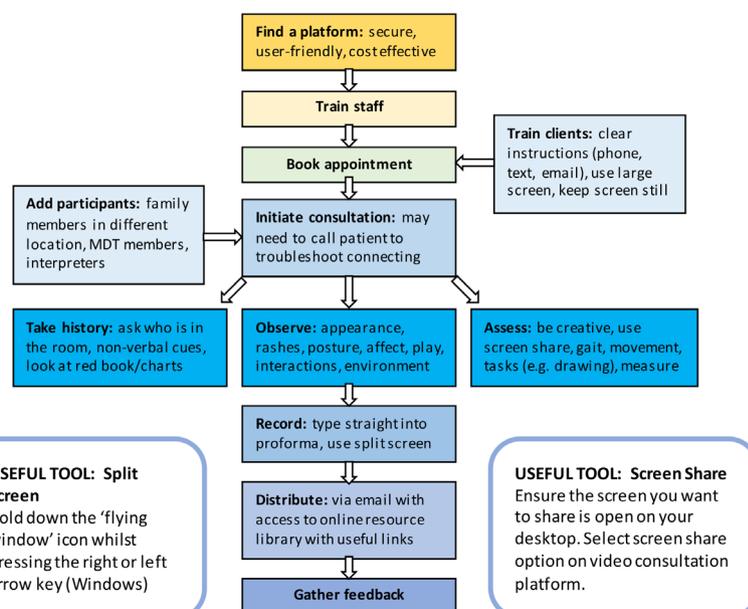


Figure 1 Flow chart showing the process of setting up video consultations with useful tools.

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Table 1 Advantages and disadvantages of video consultations based on our experience

Advantages of video consultations	Disadvantages of video consultations
<p>Accessibility—reducing infection risk</p> <ul style="list-style-type: none"> ▶ During the COVID-19 pandemic, video clinics posed no risk of infection to patients or clinicians and allowed shielded patients/families and clinicians to engage in clinics from home safely. ▶ This enabled multidisciplinary assessments to be undertaken remotely. <p>Accessibility—increased convenience</p> <ul style="list-style-type: none"> ▶ Many families stated it was more convenient to be assessed at home, avoiding transport costs, transport time and reducing time off work. ▶ Video clinics increased flexibility of clinical time for both clinicians and families and were easier to schedule. ▶ Using video clinics helped alleviate the problem of limited clinic room availability, especially considering social distancing guidelines. <p>Clinical assessment</p> <ul style="list-style-type: none"> ▶ Parents reported their child behaved more 'normally' and were more comfortable at home than in the clinic setting. ▶ It was helpful to see family living conditions particularly in assessing social determinants of health, such as child poverty. ▶ Patients were generally thankful for the offer of virtual consultation and happy with the discussion and plans made. ▶ Helpful clinical decisions were made; 70% of children assessed by video consultation were offered a follow-up assessment within the service (face-to-face general developmental or specialist clinic); 30% could be discharged from the service. 	<p>Accessibility—technical aspects</p> <ul style="list-style-type: none"> ▶ 45% of consultations in the first 2 months experienced technical difficulties; difficulty following access instructions, internet connection problem, phone batteries dying and problems with camera or sound systems on either side. ▶ Internet connectivity may be worse in rural areas, limiting access to video consultations. <p>Accessibility—social aspects</p> <ul style="list-style-type: none"> ▶ The most vulnerable families (eg, digital poverty, language barriers and parents with learning difficulties) struggled to access video consultations, making safeguarding concerns more difficult to assess; many families did not have the equipment, ability or data/internet package to access the video platform. ▶ This gap in accessibility may exacerbate existing health inequalities in access to services. ▶ Video consultations were not acceptable for a minority of families who declined this option. ▶ Parental controls; in many cases the child was able to access the video platform, but parents or carers were less 'tech savvy' and could not regulate internet safety. <p>Clinical assessment</p> <ul style="list-style-type: none"> ▶ It can be more difficult to establish initial rapport and trust over video compared with face to face. Consultations tend to be more 'adult centric' and children are not always as engaged in consultation. Techniques we employ to focus the consultation around the child in a physical environment (body language and positioning) may not be as easily translated on video. ▶ Concerns about privacy and confidentiality; we could not be sure who was in the consultation environment, and it was difficult to ensure we could speak to the child or parent alone when appropriate. ▶ Many children will still need face-to-face assessment at some stage to complete physical examination or further developmental assessment. ▶ Increased clinician fatigue was reported due to the need to interpret subtle non-verbal communication over electronic media.

SARS-CoV-2 infection during this time. These enable services to deliver more consultations and allow earlier first contact with families.

Telephone assessments are an established part of many services, but video consultation has historically been used less frequently. Video consultations have been trialled for managing a range of conditions, including type 1 diabetes² and spina bifida in adolescents.³ Studies have highlighted both advantages and challenges of video consultation.⁴ Difficulties include managing

clinical risk, acceptability to patients or staff and significant technical, logistical and regulatory challenges.⁵

This article aims to provide a structured approach to planning and delivering video consultations. We include practical advice and tools for paediatricians to optimise video assessments, using the example of developmental assessment to illustrate this. We consider the need to carefully balance the risks of missed diagnoses due to incomplete assessment via video versus reducing infection exposure and delay in assessment.

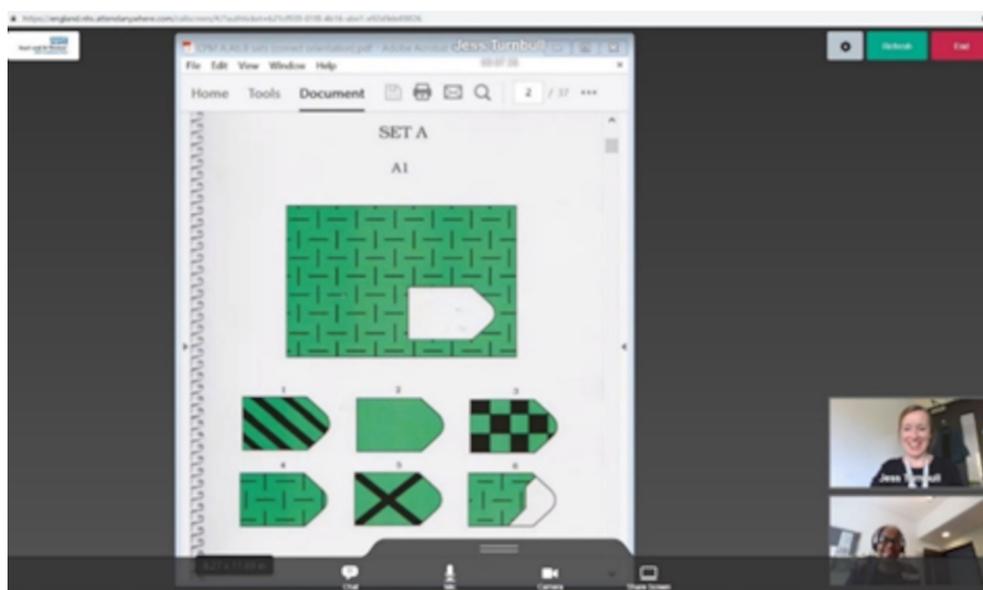


Figure 2 Using screen share to enable a virtual assessment, example of a Raven's Coloured Progressive Matrices cognitive screening task used in community paediatrics.

Box 2 'How-To' guide for video consultations (guidance sheet developed for the British Association of Community Child Health)⁷

Getting started:

- ▶ Find a platform: should be secure (compliant with information governance), user-friendly and cost-effective. The National Health Service supporting materials for rapid roll out of video consultations provides helpful advice that can be applied to any trust.⁸
- ▶ Train staff: online demonstration, one-to-one troubleshooting and practice runs have enabled video consultation to be embraced by all, regardless of different IT skill levels.
- ▶ Train clients: service users need clear instructions from staff to facilitate their engagement with video consultation. Requirements of the device they will be using need to be considered, for example, front facing camera, microphone, speaker, good internet connection, using a larger screen (tablet/ laptop/TV) is preferable if we plan to share our screen for assessment tools. Administration staff have contacted each family by telephone to discuss, following up with links sent by text and email (online supplemental material: template patient instructions). Interpreters are helpful in explaining instructions if there is a language barrier.

Book appointment: use flexibility when working remotely to accommodate patient availability and minimise clinician fatigue.

- ▶ Time allocation needs to consider absence of some aspects of physical examination but increased time required for any technical issues encountered, which could be reduced after increasing familiarity and experience.

Begin consultation: initiating and maintaining the video consultation can be challenging.

- ▶ If your patient is not visible in your virtual waiting room, be prepared to contact families by telephone and talk them through connecting.
- ▶ If your patient is using a mobile phone, ask them to hold their phone still or place it on a non-moveable surface while consulting with you.

Add participants: the ability to include other parties in video consultations has:

- ▶ Widened accessibility to include those families requiring interpreters.
- ▶ Allowed multi-disciplinary team input, particularly in specialist clinics.
- ▶ Facilitated the involvement of more than one carer in different locations in consultations

Take history: this can also be done over the telephone.

- ▶ Use of video allows non-verbal cues to be observed and can allow information gathering, for example, looking at a red book (Personal Child Health Record) directly.
- ▶ Speaking to different members of the same household separately is possible but relies on facilitation by the family.
- ▶ Always ask who is in the room; be wary regarding confidentiality and sensitive information.

Observe: vast amounts of qualitative information can be gathered from observation.

- ▶ General physical appearance, including activity, affect, dysmorphic features, skin rashes/birthmarks, body habitus, as well as specific signs such as breathing rate, pattern, sounds, signs of respiratory distress, posture, asymmetries, gait and movements can be assessed via video.
- ▶ Children can be observed playing in their familiar environment, alone or with their family members, and watched without them being aware; we can assess activity levels, play styles, behaviour and interaction with household members.
- ▶ Reaction to their carers being otherwise engaged on the phone can give insight into need for attention and methods employed to obtain it.

Assess: creativity and lateral thinking have been necessary to optimise the assessment of children over video consultation.

- ▶ Strategies for measuring children remotely include asking parents to measure at home if they have equipment, asking for recent measurements, look for last recorded measurements on medical or school records or asking for clothes sizes.
- ▶ Useful tool: the ability to screen share has been essential for completion of some of these assessments (figure 1).

Record: typing notes facilitates paperless working and the ability to upload remotely from home.

- ▶ The use of a proforma allows contemporaneous notes to be typed during the consultation, brings resources together in one place and facilitates efficient translation into a report.
- ▶ Useful tool: split screen allows the clinician to engage with the video consultation while also typing (figure 1).

Distribute:

- ▶ With carer permission, some reports have been shared by email for time-efficient distribution.
- ▶ An online resource library is helpful to allow distribution of advice leaflets and other written information by email.

Gather feedback: helpful for troubleshooting and for future service development. Some suggestions for evaluating the effectiveness of video clinics include:

- ▶ Technical: number of video clinics versus telephone clinics, technical difficulties encountered and clinical assessment tools used.
- ▶ Experience: patient and clinician feedback on experience of the video consultation, how many patients refused a video consultation and why? Potential use of adapted rating scales for assessing communication skills in non-face-to-face clinical encounters, such as the RICE scale developed by Derkx *et al.*⁹
- ▶ Patient outcomes: number of patients discharged, number of patients needing a face-to-face follow-up (and why) and unintended adverse events due to 'missed' clinical signs.

Box 3 Top tips for video consulting for clinicians

A substantial proportion of effective communication is non-verbal, which can be limited during a video consultation. A few simple measures will help to enhance your communication with your patients:

1. Use a quiet space—for best possible sound quality and minimising disturbance.
2. Centre yourself—put your webcam slightly above eye level.
3. Zoom in—minimise any background distractions for your patient.
4. Use good lighting—have a light source in front of you (not behind) as this makes your face look brighter and easier for your patient to see.
5. Turn off unnecessary computer programs—helps avoid distractions and improves computer efficiency.
6. Always have the patient's phone number handy in case we need to troubleshoot technical difficulties or continue a consultation on the phone if the internet disconnects.

ADVANTAGES AND DISADVANTAGES OF VIDEO CONSULTATIONS

During the COVID-19 pandemic, there have been specific additional drivers that have given impetus to this transition. Some of the advantages and disadvantages of video consultation from our experience are discussed in [table 1](#). These will be affected by many factors including the service set-up and patient population. An awareness of these issues will help inform the selection of patients for video consultation and the structure of pathways for referral and assessment.

WHICH PATIENTS ARE SUITABLE FOR VIDEO CONSULTATION?

There needs to be careful consideration of which patients are seen via video and how video consultations fit within the model of service delivery. We must consider the inherent clinical risk in not being able to physically examine a patient. The risk is relatively low for a developmental examination, which is observational or where part of the active examination can be facilitated by other family members with instruction. However, there are situations where a clinician's decision on whether patients need physical examination adds an extra layer of complexity and risk management, which has been well established in primary care.⁶ Referrals need to be triaged for urgency and whether the assessment can be done wholly or partially via video consultation. In some cases, telephone consultation may be sufficient. A full discussion of these issues is outside the scope of this article, but we include some key considerations.

Video consultation is not suitable for patients requiring emergency treatment or who need physical examination or child protection medical assessment. However, during the COVID-19 pandemic, we have used video or telephone consultation to take at least

Box 4 Community paediatrics case study

Ralph, aged 8 years, was referred by school due to difficulties following instructions, anxiety, rigidity and difficulties with social interaction.

On observation via video, Ralph was well presented, appeared well grown, with no dysmorphic features. He had a normal gait and movements against gravity. He was initially shy and reluctant to engage in conversation, hiding behind his mother. He had a high-pitched voice, flat affect and avoided eye contact. He was quiet and had poor reciprocal conversation skills, with very short answers. He became upset when asked him about friends at school, withdrew and cried. He could not say why he was upset. Meanwhile, a full history was taken from his mother.

After 20 min, Ralph was happy to complete the assessment, using the Raven's Crichton Vocabulary Scale and Coloured Progressive Matrices ([figure 2](#)) as cognitive screening tools and to provide qualitative information on the ability of the child to engage. (*Note these scales are standardised for face-to-face assessment; therefore, scores obtained using video-assessment can only be interpreted with caution*). He had clear and precise explanations for words and showed excellent concentration while completing the non-verbal tasks. He was not hyperactive, and no repetitive or stereotyped movements were observed. His scores were age appropriate. Strengths and Difficulties Questionnaire was completed (moderate risk for emotional disorder) as well as the Childhood Autism Screening Test (scored within range for possible Autism Spectrum Disorder).

Management plans made with Ralph and his mother following video clinic:

- ▶ Referred for speech and language therapy to assist with assessment of social interaction and communication skills.
- ▶ Referred to autism and related disorders clinic for further assessment.
- ▶ Signposted to the Local Offer website for help accessing well-being and educational support.
- ▶ Advised to complete the parent Spence Anxiety Scale questionnaire and return for review and consideration of Child and Adolescent Mental Health Service referral.
- ▶ Recommended www.kooth.com and <https://youngminds.org.uk/> for strategies on managing anxiety in children.
- ▶ Discharged from general developmental clinic follow-up.

part of the history from the child or carer in advance to minimise face-to-face contact (and therefore risk of infection transmission). In the context of an acutely unwell patient, use of initial video contact may aid clinical decision making on the urgency of response needed. Furthermore, high-risk safeguarding cases may not be suitable for video consultation, especially in cases of domestic violence where we do not know who is present and cannot ensure appropriate confidentiality.

The initial consultation with families of young children with potential life-long conditions requires a level of skill in building initial rapport and trust—getting this right is vital to the working relationship with the

Box 5 General paediatrics case study

Ten-month-old Ali was referred by his general practitioner for long-standing concerns about noisy breathing and possible café au lait spots.

There were some technical issues with establishing the consultation, but once connected, the sound and video quality were good. We were able to watch Ali playing with toys and crawling around the living room floor while his mother recounted his history.

We could observe his activity, power, coordination and some gross and fine motor skills as he played. When his mother undressed him and moved the camera closer, we could see his skin lesions were consistent with café au lait spots. He also had a Mongolian blue spot, but there were no other neurocutaneous stigmata visible. He was not cyanosed, pale or jaundiced, and he was comfortable at rest. His breathing was settled and regular, with no audible added sounds or respiratory distress.

Though Ali will need further assessment in person, we could confirm the presence of café au lait spots and reassure his mother about his development, breathing and general health. This consultation allowed us to plan future care including genetic testing and address his mother's concerns about possible underlying conditions. Though we were not able to complete what we could have done during a face-to-face appointment, Ali's mother was very positive about being able to access a review she had been expecting to be significantly delayed and that 'things were in motion'.

family that may ensue over the course of the patient's entire childhood and can be more difficult to achieve through virtual assessment.

Patient preference is also important. Families were given the choice of video or telephone consultation (strongly recommending video as first choice where possible), depending on their technical abilities and access to appropriate equipment or internet connection.

CONCLUSION

The COVID-19 pandemic has brought dramatic changes to everyone's lives and working patterns. Although virtual consultation cannot completely replace the value of face-to-face assessment with the child and family as part of a holistic assessment, it will remain an integral part of our service into the long term. We found video consultation has been the most appropriate way to maintain contact with families under our care, assisting in triaging patients and formulating management plans while minimising infection risk. Going forward, we emphasise the importance of selecting patients carefully, preparing clinicians

and patients thoroughly and continuing to be creative in adapting our clinical skills to video consultations. We hope that our experience of implementing video consultation for paediatric clinics will be encouraging for others and offer some helpful tips in shaping the way we work now and in the future.

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