Rapid deployment of emergency and outpatient ophthalmology video consultation services at Moorfields Eye Hospital

Moorfields Eye Hospital NHS Foundation Trust

Moorfields Eye Hospital NHS Foundation Trust is one of the largest providers of ophthalmology services in Europe. Between 2018 and 2019, the trust handled nearly 800,000 patient encounters, resulting in around 100,000 patients attending its main accident and emergency (A&E) department or an emergency satellite clinic.

The COVID-19 pandemic and subsequent UK lockdown in March 2020 created two immediate challenges for the trust: how to identify and manage the most critical emergencies while minimising hospital visits, and how to provide care to those patients for whom prolonged care disruption could lead to significant harm or loss of vision.

The national roll out of video consultations in trusts across England, led by NHS England and NHS Improvement, enabled rapid rollout in multiple services across the Moorfields network; covering both drop-in and scheduled appointment models of care.

What were the problems to be resolved?

In line with national guidance, the trust suspended elective services in March and sought to avoid patients and staff attending hospital appointments wherever possible to minimise the spread of COVID-19. This created a number of challenges:

1) determining which patients needed urgent care without assessing them on site

2) reducing hospital visits for patients requiring urgent advice or management at a time when high street optometry was operating a reduced service

3) continuing to provide care to mitigate the risk of disease progression

4) minimising the expected surge in demand when normal service resumes.

What was the solution?

Moorfields rapidly deployed the 'Attend Anywhere' platform to provide video consultations to patients at home. The first of these was launched as soon as the lockdown was initiated (and in one case a week in advance of the lockdown). The deployment was undertaken using an agile approach with rapid iterative testing and improvement of the process cycle.

Patients were informed of the availability of this service by social media, switchboard operators and signposting on the hospital's website.

Two clinic models were launched:

1) **Drop-in video consultations** were launched by the A&E department less than 48 hours after the UK lockdown was announced on 23 March 2020. Patients do not need an appointment and can access a virtual waiting room via a link on the Moorfields website. Care is delivered by ophthalmologists – mainly trainees who are able to work from home. This includes staff who are unable to come into hospital if they needed to self-isolate, but who are still able to work. Senior and sub-specialty input to these consultations is supported by a separate clinical instant messaging app.

2) **Scheduled, invitation-only video consultations** were launched with the Adnexal service (the department that deals with conditions affecting the area around the eye and orbits, eg cancers) and Rapid Access Clinic in Moorfields@Croydon. Patients needing review by these services are contacted by phone, email or SMS with an appointment time and information about how to join the virtual waiting room.

What were the challenges?

Rapid deployment of an entirely new model of consultation posed challenges at every stage. However, the COVID-19 situation created an environment where every part of the organisation was focused on making the new offerings work. The main challenges were:

1) **Clinical applicability**: our clinicians are accustomed to performing microscopic examination of their patients in clinic and having instant access to micron-level imaging during the visit. However, support from clinicians across a range of sub-specialties led to the identification of areas where patients could be managed remotely, and where remote triage could help to ensure only those who really needed urgent management came to the hospital.

2) **Information governance and regulatory considerations**: central support from NHS England and NHS Improvement, the platform's status as nationally procured, and a 'can do' attitude from the information governance team allowed rapid approval of the platform. A clinical safety case was generated to mitigate risks.

3) **Administration of clinics**: like any clinic, these new services required careful management including the generation of bespoke codes on the patient administration system.

4) **Project management** of a complex deployment was provided from the digital/clinical laboratory which has the specific remit to drive this kind of digital transformation project.

5) **Training** was required for all clinicians offering services, and all those involved in administration of the platform. YouTube videos, process maps, an intranet page and guidance were all provided. One-to-one training was provided remotely using Attend Anywhere, allowing the trainee to join a dedicated virtual waiting room as if they were a patient, and receive training from members of staff in isolation at home.

6) **Technical difficulties** were encountered in areas with poor cellular or wifi coverage, and on certain devices which did not meet the necessary specifications for the platform. Solutions were found on a case-by-case basis, and a large supply of iPads has been procured to solve the issue in future. Patients' use of high quality internet connection and device was particularly important in the Adnexal services to allow examination of peri-ocular structures.

7) **Patient communication:** making patients aware of drop-in services is a challenge. Prominent placement has been given to the service on the hospital's main website, and social media engagement is now supporting rapidly increasing call volume. Contacting patients by phone for scheduled appointments and the availability of patient information leaflets can help overcome technical barriers.

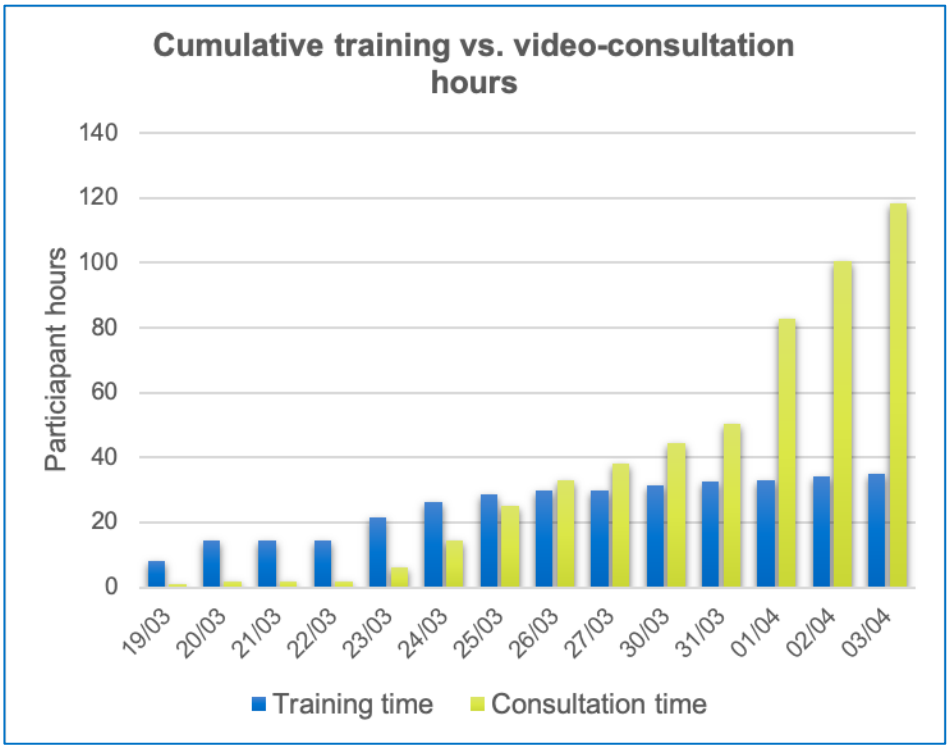
8) **Staffing** of these services would have been a challenge prior to the suspension of elective activity, but was not an issue thereafter.

9) **Providing prescriptions:** slow home delivery of prescriptions to patients in need of medication is sometimes a challenge, especially as the trust is trying to minimise the need for patients to leave their homes. Patients generally preferred picking up their medication at their local GP practice.

What have the results been so far?

Moorfields formally launched its video consultation project on 24 March 2020 and rapidly scaled up its use. In the first month, important landmarks included:

1) **Waiting areas**: 32 waiting areas created to support different services, with 11 in active use and the remainder booking first clinics.
2) **Service providers**: 131 clinicians onboarded; 35 participated in video consultations in the first five days.
3) **Training time** was outstripped by consultation time within five days of full platform launch. The chart below shows the cumulative time spent training and in consultation with patients in the first 14 days of product assessment and deployment.
4) **Scaling to high patient volume** achieved by two of the large services. A&E seeing 40-50 patients each day, and the Adnexal service running clinics of up to 18 patients per consultant. The availability of clinicians was not a limiting factor in the A&E service, with calls answered after 60 seconds of patient wait, on average. Consultation time in the Adnexal service was around 10 minutes, comparable to standard face-to-face consultations.The trust estimates it was able to avoid more than 540 face-to-face appointments within the first two weeks of launching its video consultation service.
5) **Management at home** and prevention of hospital visits achieved, with preliminary data suggesting 86% of patients managed in the A&E service can avoid the need to visit the hospital. Of those who had to attend, clinical details were provided to the receiving team via instant messaging to minimise assessment and contact time.
6) **Organic growth** was achieved, with steadily increasing interest from new services and clinicians in offering video consultations.



Time spent training clinicians to use the platform was rapidly outstripped by the amount of time clinicians spent delivering care.

What were the learning points?

The deployment of the platform has been primarily an administrative and cultural challenge rather than a technical undertaking. Some of the trust's learning points include:

1) **Early adopters are critical** in framing the clinical applicability of video consultations in a specialty traditionally thought to be ill-suited to them. Successful models provide exemplars for other clinical services to follow.
2) **Robust administrative processes** are needed to ensure uniformity and high quality in how video consultations are deployed. It is important that administrative support is provided to free clinicians from the need to administer these services.
3) **Most patients are well able to use the platform**, with few examples of technical failures or inability to use the platform.
4) **Patient signposting** to new services is essential.
5) **Remote drop-in training using the platform** allows for rapid onboarding of new clinicians. By casting them first in the role of patients during training they gain empathy for the patient experience. It also unlocks the contribution of colleagues self-isolating due to COVID-19.
6) **Project management** should ideally be provided by a team oriented towards digital transformation. This is crucial to balancing the many interacting components of such a project.
7) **Patients like the offering**, generally rating the Adnexal service as 'excellent', and providing positive reviews of the emergency services. Most patients appreciated the

added convenience of the system, although around half of the Adnexal patients preferred the examinations possible in a traditional consultation. Video consultations were preferred to telephone consultations by patients, partly because of the ability to show the clinician physical signs.

8) **Scepticism around the usefulness of video consultation in ophthalmology was probably wrong.** Necessity has forced the trust to approach problems in new ways, and it is likely many services, and in particular those described above, will be sustainable after the COVID-19 challenge passes. Clinician feedback suggests that with current standard devices, some degree of examination is possible over webcam for the Adnexal service.
9) **Support from senior management and clinical leads** is essential to ensure barriers are rapidly overcome.

Next steps and sustainability

Current deployment is not complete. While some services (the early adopters) are rapidly scaling up, others (the fast followers) are just beginning to see their first patients. For other services, there are more pressing considerations and video consultations will form a part of medium-term planning as and when immediate priorities are met.

Next steps are:

1) **Support early adopters and fast followers** in achieving scale, and provide rapid troubleshooting for issues that might arise.
2) **Refine booking process** to optimally stagger patients and minimise waiting time in booked clinics.
3) **Embed clinic administration processes** in the fast follower services to support consistency and quality of service delivery.
4) **Engage with colleagues** who have not yet started the video consultations journey.
5) **Increase the capabilities of video consultations.** The trust is rolling out methods to support the assessment of vision at home during video consultations using apps and more traditional methods. The trust also plans to implement pre-consultation questionnaires to allow prospective collection of symptom scores, patients' reported outcome measures, clinical histories, as well as post-consultation feedback forms to help drive further improvement.
6) **Provide standardised hardware** (eg iPads) to support those providing clinical care using this platform.

The trust is also considering how it will embed video consultations in its day-to-day operations beyond the period of responding to the COVID-19 challenge. It is working to ensure:

1) **Rigorous processes are implemented** to allow transition to business as usual for those services which have shown the most promise.

2) **Optimisation of the video-consult experience** with ancillary capabilities (eg pre-consult symptom scoring) deployed.
3) **Consideration of long term rostering** after clinicians return to regular duties. This is more challenging and will require consideration of options such as dedicated telemedicine time in job plans if new services are to be maintained at scale.
4) **Additional effort made to support digital maturity** so clinicians can continue to provide care when off-site with access to medical records.

Want to know more?

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