

When, where and how should patients receive time-lapse videos? A consultation

KEY FINDINGS

- It is increasingly common for IVF clinics to share time-lapse videos of embryos with fertility patients
- Until now little was known about how these videos are received and interpreted by IVF patients
- Our research shows that when and where patients receive and watch videos of their embryos can have a significant impact on their experience of IVF treatment
- In general, patients and partners enjoy receiving the videos and see them as a meaningful record of their IVF experience
- However, patients usually watch the video without receiving any explanation from a professional about the content and in a situation where they are unable to ask professionals about what the video shows, typically at home
- Most IVF patients do not know how to interpret embryo development or understand what the video means for their particular case and treatment. This can cause patients significant concern and anxiety
- If treatment is unsuccessful, it can be very difficult for patients to manage their emotional attachment to the content of embryo videos

Our research has revealed that sharing embryo videos with patients receiving fertility treatment can have unintended negative consequences. This document sets out steps that can be taken to minimise this risk to IVF patients. Drawing on our research results and discussions with fertility professionals, we discuss current practices for sharing embryo videos. Our aim is to communicate insights around when, where and how patients should receive time-lapse (TL) videos of their embryos, to support care providers and to improve the experience of IVF patients who receive TL as part of their treatment.

This is an ongoing consultation and we will provide regular updates. We welcome your feedback. Please get in touch with the research team at: rhb-study@qmul.ac.uk

The research is based at Queen Mary University of London and funded by the Wellcome Trust..

IMPLICATIONS FOR PRACTICE

- Fertility clinics should think carefully about when, where and how time-lapse videos of embryos are shared with IVF patients to avoid unintended negative consequences for patients
- Clinics should consider whether patients fully understand the implications of watching the videos of their embryos
- Patients should be provided with carefully curated information before watching videos
- Clinics should develop best practices on how to share time-lapse videos with patients
- Professional bodies should consider developing guidelines on best practices for sharing videos

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About the research

Time-lapse (TL) incubators allow fertility professionals to take recurrent pictures of embryos during their first days of development. This enables clinics to monitor the development of embryos without having to remove them from the safety of the incubator. The images can also be used by clinics to produce short videos of an embryo's growth. Our analysis of fertility clinic websites (data collected in June 2022) shows that 68% (71 out of 105) of fertility clinics in the UK include TL in their treatment. Of these 71 fertility clinics, 13 clinic websites inform patients that they will be able to receive videos of their embryos.

Many studies have focused on the potential benefits of TL associated with non-invasive embryo selection, but very few have explored how TL videos are shared with patients and how patients react to them. A few recent survey-based studies suggest that watching videos of their own embryos may have a positive effect on patients' IVF experience (Blomquis et al., 2017; Bui et al., 2018; Picou et al., 2021) and even increase pregnancy rates (Garcia-Faura et al., 2021). This positive view is mirrored in the European Society of Human Reproduction and Embryology's paper on 'Good practice recommendations for the use of time-lapse technology' (2020), which questions how much of the information obtained through TL should be shared with patients, but does not extend this concern to how videos are shared.

Our new research (Hamper and Perrotta, 2022) shows that sharing TL videos with patients is a common practice, although there is significant variation in how clinics share videos. Patients and partners almost always described enjoying the videos, either because they found them interesting or educational, or because the videos represented something meaningful in terms of their treatment or hopes for a future child.

Video sharing practices – when, where and how patients receive videos – vary considerably between clinics. Some patients receive the video via their online patient

portal or an email link, others by purchasing or being given the video on a USB at the clinic, or having the USB posted to their home. Due to these sharing methods, TL videos were often received by patients once they had left the clinic and seen after the embryo transfer and outside of consultations. The videos are often seen for the first time when the patient opens the video file, and most participants said their home was the main location for watching these videos. Patients usually watch the video for the first time without receiving very much background information from a professional about the content of the video, and in a situation where they are unable to ask professionals questions about what the videos show. This often led to unanswered questions around the details of embryo development or what the video might mean for their particular IVF case and treatment.

Our analysis of interviews with 51 patients and partners shows that receiving videos of their embryos while undergoing fertility treatment can cause confusion and distress. Participants often described shifting emotions about the embryo videos, especially when they felt unprepared for receiving them. Some talked about how they had opened the video via a USB or online link without actually knowing what they were looking at. Some felt really confused about what to feel and do with this material.

Participants said they found it difficult to interpret or contextualise the imagery outside the clinic and expressed their concerns about how to interpret embryo development. Patients were often very aware that time-lapse videos contain potentially important information about the quality of their embryos. For this reason, several participants described comparing their videos to others they found online and trying to use this information to assess their chances of pregnancy.

Participants also described making associations between the embryo videos and a potential future baby. This made it difficult for them to manage their emotions in relation to the videos, especially when they were received before being able to test for pregnancy. When IVF treatment was unsuccessful, patients were often quite torn about the videos. Some would hide the USB in a box or a drawer because it

was too difficult to deal with in that moment. At the same time, they felt an attachment to the video and did not want to throw it away.

Why does this matter?

Undergoing IVF can be a stressful experience for patients and partners. It's important that clinics do not unintentionally add to this stress. Our study shows that patients often find some aspects of receiving videos of their embryos difficult. Sharing these videos with patients, especially during the two-week-wait for pregnancy test results, can cause patients significant distress. Patients know that the videos contain important information about their embryos, but the videos are largely unexplained. For this reason, clinics should carefully consider when, where and how videos are shared.

Consultation overview

Our research shows that when and where patients receive and watch videos of their embryos can have a significant impact on their IVF treatment experience. We sought views of fertility professionals on:

When the videos are shared. Providing patients with videos immediately after embryo transfer is not ideal, as the video can become difficult to deal with in cases where the transfer does not lead to pregnancy.

Where the videos are shared. This will determine whether patients have the opportunity to ask direct questions about the video and embryo development.

How the videos are shared. For example, providing patients with some background information before sharing the video so that they know what to expect and can make an informed decision about whether they want to engage with the videos or not.

When should the videos be shared?

There is general agreement that the embryo transfer stage is not the best time to share videos with patients, due to the potential emotional consequences in the case of an unsuccessful treatment. Some fertility professionals suggested that videos should

not be offered until after patients know the outcome of their treatment.

However, professionals also agree that patients should be offered the chance to see the videos, even in unsuccessful cycles. This can help to give closure and offer the opportunity to explain why the treatment did not succeed.

There is general agreement that patients have the right to receive information about their treatment when they ask for it, including the videos of their embryos. However, there is no consensus on how this information should be shared. For instance, many professionals believe that videos of embryos that do not survive or are not transferred should not be shared, while others are happy to provide videos of frozen embryos before they are transferred.

Where should the videos be shared?

There is some evidence that videos can improve patients' experience if they are watched during a consultation or with the support of fertility professionals (Blomquis et al., 2017; Bui et al., 2018; Picou et al., 2021). However, this might not always be possible, especially if videos are provided only after patients know the results of their treatment.

There is general agreement that if videos are watched outside the clinic, patients should be adequately prepared. This means providing patients with background information on the videos and their meaning before they receive them.

It is important to recognise that even when patients viewing videos at home are encouraged to call clinics to ask about the videos, they rarely take up this offer.

A potential solution would be to provide general information on the videos, their meaning and implications alongside access to the videos.

How should the videos be shared?

While professionals agree about the importance of providing adequate information on the videos before they are shared with patients, opinions on how much information to share vary.

Some professionals believe it is important to provide detailed information on the videos, including predictions in terms of success rates. Others disagree arguing that prediction values are not evidence-based and could have potential negative effects on patient experience.

While it is important to offer patients access to information, professionals should consider different expectations and needs. There are also concerns about overwhelming patients with information, particularly as they already receive a large body of information during IVF treatment.

One suggestion was to provide information on the potential implications of watching videos, drawing on the experiences of other patients to inform this choice. Support could also be offered to help patients decide whether they want to receive videos and when.

Further steps

While improving IVF patients' experience and minimising potential distress is a shared aim, there is no clear agreement on best practices and/or whether professional guidelines should be developed.

Many professionals agreed that clinics should revise their current local practices

around when, where and how videos are shared in light of these research results. It was suggested that guidelines on how to share videos with patients might be produced by professional bodies in the field. However, some professionals expressed concerns regarding producing guidelines as there is a lack of agreement on whether TL is even effective or not. It is worth noting that in the HFEA traffic light system TL is marked 'amber'. This means that there is conflicting evidence on the effectiveness of the tool to increase life birth rates, and therefore it is not recommended for routine use. Others suggested that as this technology is already in widespread use, professionals should use it to support and enhance the journey of fertility patients by integrating the use of videos to offer extra information to patients. As such, further discussion on the development of guidelines by professional bodies is needed. The research team is available to discuss these research results with clinics and professional bodies. We welcome your thoughts and feedback. Contact us at: rhb-study@qmul.ac.uk

Methodology

The research adopted a qualitative and ethnographic research methodology to explore the introduction of new biomedical technologies in the field of IVF. It analysed the emerging processes of knowledge production and the implications for the experience of IVF patients (both men and women). Part of our research explicitly focused on how some treatments add-ons are used in IVF clinics and how patients approach them. More specifically, methods included the following:

- Interviews with 51 IVF patients and partners
- Interviews with 43 fertility professionals
- Three focus groups with 17 IVF patients and partners
- Three focus groups with 18 fertility professionals
- Online survey with 314 IVF patients and partners
- 250h+ of ethnographic observation at six fertility clinics
- Analysis of policy documents and professional statements

The study received approval from the Health Research Authority, Queen Mary's research ethics committee, and locally at the participating fertility clinics. Further details about these approvals can be provided upon request.

Remaking the Human Body

The project “Remaking the Human Body: Biomedical Imaging Technologies, Professional and Lay Visions” (2016/2023) investigates the introduction of new technologies in IVF and their consequences for professionals and patients. The project aims to analyse different points of view in the field of IVF and foster a deeper mutual understanding among people with differing perspectives, concerns and experience.

The project is headed up by Dr Manuela Perrotta, Reader in Technology and Organisation at QMUL’s School of Business and Management, and is being funded through the Wellcome Trust’s Investigator Award in Medical Humanities/Society and Ethics.



Further information

Visit our blog for more information, publications and updates on the research at <https://remakingthehumanbody.sbm.qmul.ac.uk/>



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References

Blomquis et al. (2017) Patients experience of viewing time-lapse sequences: a prospective survey study. *Gynecol Reproduct Endocrinol-UK*; 1–6.

P-568 Remote access to embryo images and video during their cycle enhances a patients In Vitro Fertilisation (IVF) experience (Bui et al., 2018, Sydney, Australia)

P-277 Time-lapse technology improves patient In-Vitro Fertilization experience (Picou et al., 2021 - IVF Lab, Austin, USA)

P-498 Patient’s pregnancy rates after IVF fresh embryo transfer positively correlates to the number of visual connections to live

blastocyst development images of own embryos (Garcia-Faura et al., 2021 - Institut Marques, Spain)

The ESHRE’s “Good practice recommendations for the use of time-lapse technology” (2020)

Hamper J.A. & Perrotta M. (2022). “Watching embryos: Exploring the geographies of assisted reproduction through encounters with embryo imaging technologies”, *Social & Cultural Geography*, available at <https://doi.org/10.1080/14649365.2022.2073467> (open access)

About Queen Mary University of London

Queen Mary University of London is a world-leading research-intensive university with over 25,000 students representing more than 160 nationalities.

A member of the prestigious Russell Group, we work across the humanities and social sciences, medicine and dentistry, and science and engineering, with inspirational teaching directly informed by our research.

In the most recent exercise that rated research in the UK, we were ranked 5th in the country for the proportion of research outputs that were world-leading or internationally excellent. We offer more than 240 degree programmes and our reputation for excellent teaching was rewarded with a silver in the 2017 Teaching Excellence Framework (TEF) awards. Queen Mary’s history dates back to 1785, with the foundation of the London Hospital Medical College. Our history also encompasses the establishment of the People’s Palace in 1887, which brought accessible education, culture and recreation to the East End of London. We also have roots in Westfield College, one of the first colleges to provide higher education to women.