

Beyond the Black Box:

The Case for Embryo Visibility

How sharing embryo development data with IVF patients reduces anxiety, builds trust, and improves the clinical relationship-without adding burden to the lab.

TOPIC: Patient Transparency in ART · FAIRILITY.COM

EXECUTIVE SUMMARY

IVF is one of medicine's most emotionally demanding journeys. Yet for decades, patients have navigated treatment largely in the dark - receiving embryo updates by telephone, relying on clinical shorthand they struggle to interpret, and waiting days between communications with little context.

This paper draws on research collected from 17 clinics and 1591 cycles across major IVF markets globally with direct clinical testimony, patient-reported surveys and treatment outcomes to argue that guided sharing of embryo development data - including time-lapse videos - is a clinically meaningful intervention. It reduces anxiety, builds trust, strengthens the patient-clinician relationship, sets realistic expectations, and improves the experience of care without creating additional burden for clinical teams.

The Emotional Reality of IVF

The period between oocyte retrieval and embryo transfer is characterized by acute information anxiety. Patients wait for fertilization and cleavage updates, blastocyst outcomes, and a transfer decision. While the clinical challenges of stimulation protocols, egg retrieval, and embryo transfer are well-documented, the psychological dimension of treatment receives comparatively less attention.

Research consistently demonstrates that anxiety and depression are prevalent among IVF patients, with rates substantially higher than in matched general populations¹.

Psychological distress has been associated with poorer treatment adherence, higher dropout rates, and negative impact on quality of life².

Most patients find it difficult to manage the typically lengthy, technically demanding, and disruptive fertility treatment, as well as the high uncertainty of success. Most patients experience some degree of emotional distress during treatment¹.

When patients describe feeling "out of control", they are articulating precisely the experience of an information gap; the sense that something is happening to their bodies and their potential future family, and they cannot see it, understand it, or meaningfully participate in it. Addressing that gap is a clinical imperative.

“

Infertility treatment is mentally extremely draining and the CHLOE program gave me a lot of peace of mind because I could see how far along our fertilized eggs were with just a few clicks. I didn't have to wait for someone's email or phone call, and that made the whole process much more enjoyable.

— IVF Patient

The Information Gap: Why Words Alone Are Not Enough

Research in health communication consistently shows that verbal information, particularly when received in moments of acute stress, is retained poorly and often misinterpreted³. Patients undergoing IVF frequently arrive at consultations with misconceptions about their embryo grades, or with distress triggered by a figure that is presented with insufficient context. Without a visual reference, these words are nearly impossible to anchor to any concrete understanding.

“ I’ve had so many cycles before. I’ve always been given information on the telephone and I’ve always tried to imagine it. Now I don’t have to imagine it anymore. I can see it. I understand it better.

— IVF Patient [via clinical testimonial]

This is the fundamental problem that embryo video access addresses. It does not replace the embryologist’s explanation - it makes that explanation comprehensible. Patients who have watched cell division unfold in time-lapse arrive at their consultation with a shared visual reference point. The conversation that follows is categorically different in quality.

FIGURE 1·PATIENT EXPERIENCE SURVEY

How has having access to watching your own embryos develop in real time affected your experience with IVF treatment?



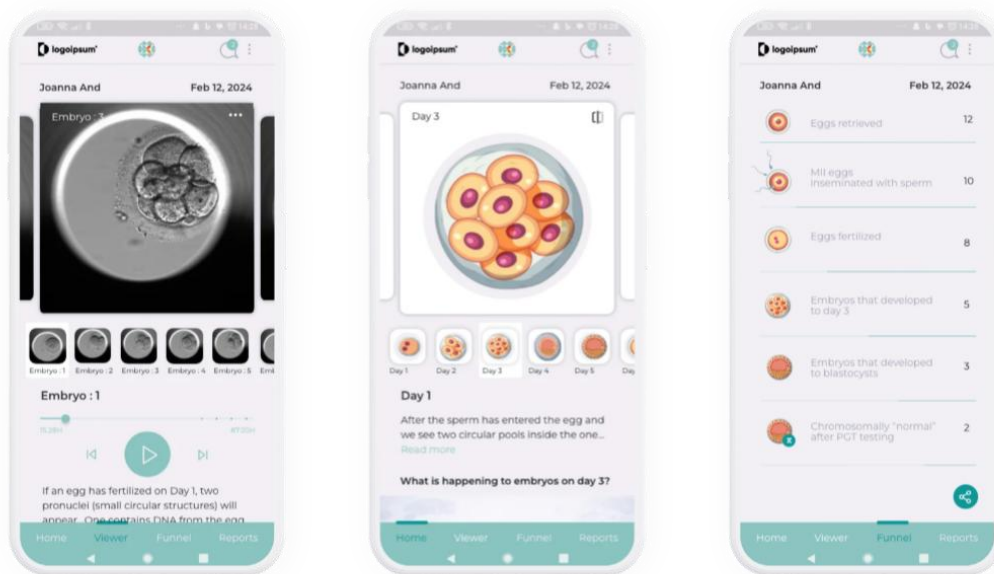
n=310 patients. Average score: 4.5/5. Source: CHLOE Patient Viewer user survey.

CHLOE's Patient Viewer

CHLOE's Patient Viewer is a purpose-built interface through which patients can access their embryo development videos, personalized reports, and treatment summaries in real time.

- Time-lapse video streaming: Patients watch their embryos develop from fertilization onward, in the same format reviewed by their embryologist.
- Personalized treatment reports: Clear, visually-driven end-of-cycle summaries contextualizing outcomes within the patient's treatment history.
- A lasting keepsake: Patients receive a meaningful visual record of their journey, regardless of outcome.

FIGURE 2 · CHLOE'S PATIENT VIEWER
CHLOE's Patient Viewer - patient-facing interface



Does More Information Create More Worry?

TRANSPARENCY AND PATIENT OUTCOMES

Studies examining the relationship between patient information access and psychological outcomes in IVF consistently show that perceived informational support is strongly associated with higher patient satisfaction, increased feelings of control, improved treatment experience and stronger intentions to continue treatment⁴⁻⁷. Importantly, contrary to a common concern among clinicians, providing more information does not increase patient anxiety; rather, well-informed patients tend to experience less distress and a greater sense of control during treatment⁷⁻⁹.

<p>↓ Anxiety</p> <p>Patients consistently report lower anxiety after viewing embryo development via CHLOE's Patient Viewer</p>	<p>↓ Calls</p> <p>Clinics report meaningful reduction in routine update calls after Patient Viewer launch</p>	<p>↑ Trust</p> <p>Patients report greater confidence in clinical team and treatment decisions</p>
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* Based on clinical experience and patient-reported outcomes from CHLOE-using clinics.

The most commonly raised objection to sharing embryo development data with patients is also the most understandable: will patients lacking scientific training interpret what they see in ways that generate unnecessary anxiety or interfere with clinical communication? This is a legitimate question, and it deserves a direct answer.

“

My initial concerns before I started using CHLOE was that it would overwhelm patients by giving too much information that may not necessarily be helpful or cause unnecessary worry. However, I can tell you that that was just a fear - and not necessarily something that proved itself in practice.

— Clinical Embryologist

Patient video access does not remove the embryologist from the interpretive process; it changes the nature of that process. The explanation still comes from the clinical team. What changes is that patients arrive at that conversation with a visual reference point rather than a blank slate.

“

I cannot remember a single time when someone came and told me they saw something was abnormal-because ultimately the explanation still has to be given by a clinical embryologist. If anything, it's reduced the number of times we discuss on the telephone, because they already understand. They can see what you're describing. So they don't have so many questions at all.

— Clinical Embryologist

SETTING REALISTIC EXPECTATIONS

One of the most clinically significant benefits reported by embryologists is the role of video access in establishing realistic expectations. Research confirms that ongoing, transparent information throughout the IVF journey is critical for managing unrealistic expectations and helping patients prepare for difficult outcomes¹⁰. Clinical experience with CHLOE's Patient

Viewer suggests that visual access to embryo development is a particularly powerful vehicle for delivering that transparency.

WITHOUT VISUAL ACCESS	WITH CHLOE'S PATIENT VIEWER
<ul style="list-style-type: none"> • Abstract grades require significant interpretation • Fragmentation is easily misunderstood • Outcome news arrives with no shared context • Clinical calls are longer and more frequent 	<ul style="list-style-type: none"> • Patients arrive visually informed • Concepts like fragmentation are shown, not described • Outcomes discussed within a shared visual context • Telephone update calls are meaningfully reduced*
<p>Patients feel like bystanders in their treatment</p>	<p>Patients feel engaged, empowered, and connected</p>

*according to lab professionals' testimonials.

05 / THE PATIENT VOICE

The Patient Voice

No theoretical argument can substitute for the testimony of patients who have experienced embryo visibility firsthand. The quotes below are drawn from patients who accessed their embryo development data through CHLOE's Patient Viewer.

“Absolute game changer for women going through this really tense and difficult period-it gives you back a sense of control.”

“It was really fun to watch how the embryos develop. You get a better understanding of what's going on with them. It was a really great experience, and I recommend it to everyone.”

“I am very happy to use the CHLOE program to monitor the development of my embryos. It makes me feel both excited and reassured, trusting in the results it delivers.”

“It provides some visual representation of the technical vocabulary used throughout the IVF journey which is very helpful.”

Across this testimony, three themes emerge with notable consistency: **control** - a sense of control over an otherwise passive experience; **comprehension** - the ability to understand clinical language through visual context; and **connection** - a felt relationship with the embryos as a meaningful and visible part of the patient's journey.

“ I gained new knowledge about embryo development because with the website it takes longer to assimilate and digest new information. So I understood a lot more when I met with the embryologist before the transfer than I did the first time.

— IVF Patient

06 / CONCLUSION

Clinic Impact: Efficiency, Trust, and Differentiation

Beyond the patient experience, embryo visibility has potential operational benefits for the clinical team. The most consistently reported by clinics is a meaningful reduction in routine update calls.

Patient communication is one of the less visible but consistently time-consuming aspects of IVF care. Patient questions about embryo progress whether raised by telephone, message, or at follow-up appointments represent an ongoing and often underestimated demand on clinical and laboratory staff, who must track patient progress, field enquiries, and explain results across multiple touchpoints. When patients can see their embryos directly, many of these interactions are likely to become unnecessary when the question is answered before it is asked.

“ When patients see the whole embryo development, they not only trust the process more, but it also helps them see how their embryos are developing. It helps set realistic expectations. A lot of patients have informed us that the level of anxiety and stress has reduced. And we've received extremely positive feedback.

— Clinical Embryologist

Furthermore, there is a competitive dimension. In a market where patients often have a choice of provider, a clinic that offers visible, transparent, technology-forward care is differentiated in a way that matters. **Transparency is not just ethically sound - it is commercially meaningful.**

FIGURE 3·PATIENT ENGAGEMENT SURVEY

How often have you logged on to view your embryos?



n=309 of 310 patients. Source: CHLOE Patient Viewer user survey.

The argument for sharing embryo development data with IVF patients is not primarily a technological argument - it is a clinical and ethical one. Patients undergoing IVF are experiencing an emotionally demanding process. They deserve to see and understand what is happening to their embryos.

The evidence from published research, from clinical experience, and from the voices of patients themselves points consistently toward a single conclusion: transparency does not overwhelm patients. It reassures them. It does not undermine clinical authority. It strengthens it. It does not increase the communication burden on clinical teams. It reduces it.

Transparency is not a risk. It is the standard.

Clinics that have implemented CHLOE's Patient Viewer describe the experience consistently: initial hesitation gives way to a recognition that this is simply the better way to practise. Patients are more informed, more trusting, and more satisfied. Clinical teams spend less time on routine calls and more time on meaningful conversations. The embryologist's role is not diminished, it is elevated.

Fairtility's CHLOE platform makes this possible - not by simplifying the science, but by making it visible.

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More Patient Feedback

Real voices from our patient surveys

The following responses were collected as part of a many patient survey conducted across clinics using CHLOE's Patient Viewer. Quotes are reproduced verbatim from patients who consented to share their experience. Feedback relating to pricing, clinical decisions, or operational matters has been excluded; what follows reflects patients' direct experience of accessing their embryo development data.

TRANSPARENCY & FEELING CONNECTED

“

I loved having access to the videos so I could do a quick daily check and feel like each day we were one step closer to our dream of having a baby.

— IVF Patient

“

Being able to watch our embryos develop gave us something real to hold on to. Even though our embryos weren't viable, it was a gift to witness this miracle.

— IVF Patient

“

The videos allowed me to check in without disrupting the providers. I felt a part of the treatment team.

— IVF Patient

REDUCED ANXIETY & MANAGING EXPECTATIONS

“

Watching our embryos every day made the week go by faster and helped me manage my expectations.

— IVF Patient

“

It helped prepare myself for Day 7 because I already had an idea of how many embryos were going to make it.

— IVF Patient

“

Helped to make the wait feel more tolerable.

— IVF Patient

TRUST IN THE CLINIC

“

It helped build trust with what the providers were saying and what I actually saw.

— IVF Patient

“

The transparency aided in the trust in the process overall.

— IVF Patient

“

The feeling that they did not have to leave the incubator for assessment made me reassured.

— IVF Patient

FEELING EMPOWERED

“

I felt a part of the treatment team because I could see each stage of development.

— IVF Patient

“

I loved being able to watch the embryo develop daily instead of waiting for an update.

— IVF Patient

“

It gave me something tangible to hold on to after years of infertility.

— IVF Patient

OVERALL EXPERIENCE

“

The CHLOE videos made this round of IVF so much better than my last.

— IVF Patient

“

It's an amazing thing! It makes the process so much less stressful.

— IVF Patient

“

The videos encouraged me to talk to friends and loved ones about my treatment.

— IVF Patient