

Use Case

How an electronic witnessing system can play a key part in improving laboratory performance



CooperSurgical®

Fertility Solutions



INTRODUCTION

Fertility procedures should maximize the chance of success and minimize risks

Fertility clinics always seek out the best data to inform and optimize their fertility treatments. Yet, even when data is available, clinics may lack the resources, time or advanced training to interpret and make use of these insights easily.

This use case discusses the challenges that fertility clinics experience in working to standardize lab performance and how an electronic witness system (EWS) like RI Witness™ can help reduce lab errors, build confidence for clinics and patients while playing a key part in improving lab performance.

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CHALLENGE #1

Manual double witnessing is time-consuming and disrupts workflows

case in point

When moving gametes and embryos between dishes, the embryologist performing the identification check must wait until a second embryologist is available to “witness” the check. The workflows of both embryologists are disrupted, and the gametes and embryos may be outside of the incubator longer than necessary.

Fertility labs are complex environments

To ensure accuracy throughout each IVF process, an embryologist must manually check the patient identification (ID) as labeled on their gametes and embryos. The process of manual double witnessing disrupts workflows which can be unsettling for laboratory staff. In addition to this, manual witnessing can increase the critical time gametes and embryos are outside the incubator and increase the lab staff needed per shift.¹ Even with experienced embryologists and clinical staff, the risk of manual witnessing errors occurring is always present.²



A recent review by Gupta et al. (2020) found manual IVF witnessing in some clinics amounts to almost 50,000 ID checks per year. That's 50,000 chances of human error and 2,250 hours of productivity lost due to workflow interruptions.⁸



The chance to help people become parents is a source of pride for many embryologists.³ The implications of success and failures for IVF cycles are so emotionally connected to the patients that it is shown to elevate anxiety levels of medical staff.⁴⁻⁶ Likewise, patients are nervous that a mix-up might occur during their IVF journey due to highlighted news coverage around infrequent misidentification errors.⁷

TOUCHPOINTS IN THE LAB

- oocyte pick-up
 - sperm collection
 - sperm processing
 - sperm cryopreservation
 - egg denudation
 - insemination – ICSI, IVF and IUI
 - embryo transfer
 - cryopreservation of gametes and embryos
 - embryo biopsy
 - egg, embryo and sperm donation
- 

RI WITNESS

Know the “who, what, where and when” at every step

With RI Witness and its radiofrequency identification (RFID) technology, every time a gamete or embryo is moved from one dish, tube or flask to another, it can be electronically tagged to decrease the risk of a mismatch/misidentification occurring throughout the IVF process.¹

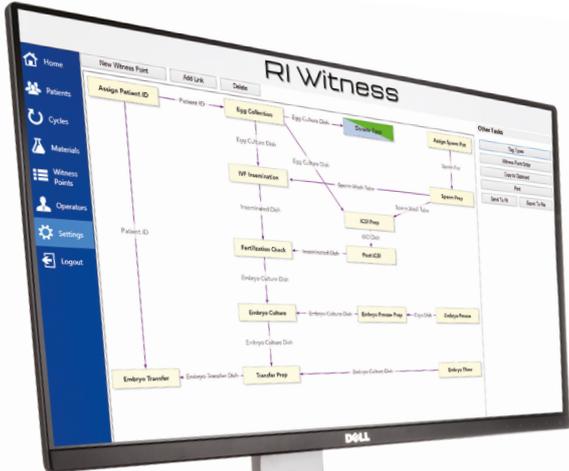
RI Witness helps clinics track the many touchpoints in the lab and record the procedure times, patient-information, biological materials, and workstations used during the procedure. This provides information that may help identify any workflow disruptions, timing issues or whether current standard operating procedures (SOPs) are optimal.⁹



RI Witness alleviates the burden of constant manual double witnessing, improving procedure traceability, minimizing the risk of ID errors and helping embryologists work more efficiently and confidently without interruptions.¹⁰ The decreased need for double manual witnessing can also help clinic management improve staff allocation and training requirements in clinics, social distancing protocols and administrative duties associated with traceability, and compliance with SOPs.¹⁰



A study by Forte et al. (2016) found that patients expressed an extremely high satisfaction rate when a fertility clinic had an electronic witnessing system to follow all the steps of their IVF journey.⁷



CHALLENGE #2

Underutilized data sitting in fertility clinics

case in point

Across a group of clinics, varying success rates are noticed. Clinics perform a manual documentation but there are not any specific benchmarks to analyze lab performance across clinics. To analyze more closely, they must start a lengthy analog review to compare data points between clinics to search for any deviations in procedures.

Copious amounts of data for every IVF cycle

The ability to track various areas of lab performance is important if clinics are to continue to exceed competency and benchmark levels.¹¹ Some clinics may lack the time, equipment and advanced training needed to utilize collected data optimally, while others may not be collecting any data, and are likely to be working based on original clinic protocols and not current KPIs.¹²



Each laboratory should develop its own set of KPIs founded on laboratory organization and processes, and develop a systematic, transparent and consistent approach to data collection and analysis of KPIs.

– The Vienna consensus (ESHRE, 2017)

Many clinics may rely on protocols and procedures that might not work as efficiently for their individual clinic's setup. When it comes to human error, analysis can sometimes reveal underlying issues such as training, lab design or witnessing protocols.¹³ But without the means to collect data, assess or troubleshoot protocols and procedures, keeping clinical SOPs optimal becomes an impossible task.¹⁴

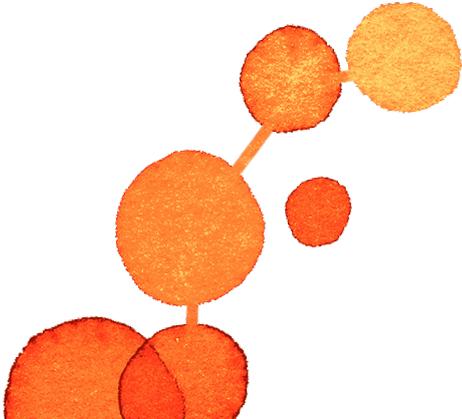
DATA POINTS

Average procedure time by operator

● Embryology 1, ICSI Prep

Operator	Count	Time	
Sally	1	02:10	
Mike	1	01:36	
Emily	1	01:22	
Yujin	1	00:55	

Example shows procedure times may exceed those deemed appropriate for undertaking ICSI Prep.



RI Witness helps you utilize data that is important for your clinic

For every IVF cycle in the lab, RI Witness helps with the analysis of a clinic's IVF procedural parameters – comparison in clinic groups, real-time data accessibility, and lab competency review or equipment functionality.¹⁵

RI Witness provides a clearer overview of the front- and back-end of clinics to troubleshoot any workflow bottlenecks and ensure that SOPs are maintained, as well as any regulatory compliances for equipment and technical systems.¹⁶

RI Witness covers all aspects of ways of working but can be focused on a clinic's individual PIs and KPIs to help with continuous improvement in lab performance.^{15,17}

DATA POINTS

Benefits of an electronic witnessing system based on a survey of 50 embryologists.¹⁵

Reduce errors in labeling issues

80.4%

Improve sample traceability

78.3%

Reduce the risk of sample mismatch errors by minimizing disruptions

60.9%

CHALLENGE #3

Implementing an Electronic Witnessing System can seem like an overwhelming project

case in point

A clinic management team wants to switch from a manual witnessing to an electronic witnessing system but is concerned about how its introduction will be perceived by staff and the possible disruptions to implement into the lab.

Misconceptions around introducing new technology into clinics

Implementing changes into any work environment can come with many perceptions of why they are needed. For clinics bringing in new technology, some staff may feel a level of apprehension that their roles and ways of working may change or be interrupted.¹⁰ Also, clinics eager to adapt their current setup may also feel overwhelmed by the whole process of implementation.¹⁰

This lack of clarity regarding the why, how and when this new technology will be put in place can decrease staff cooperation, a key component necessary for successful implementation.

CooperSurgical's RI Witness team at your service

At CooperSurgical, we have a team devoted to the set-up of the RI Witness system to match the needs and processes of your clinic and to ensure a smooth transition. The RI Witness team is available prior to initial set-up, during the installation process, for clinic staff training, and for the local IT/cloud set-up.

The process starts with regular meetings to share best practices and connecting clinics to current customers to address any real-life questions. The RI Witness team will follow-up after implementation with scheduled review meetings and help tailor SOPs and performance goals to RI Witness metrics.

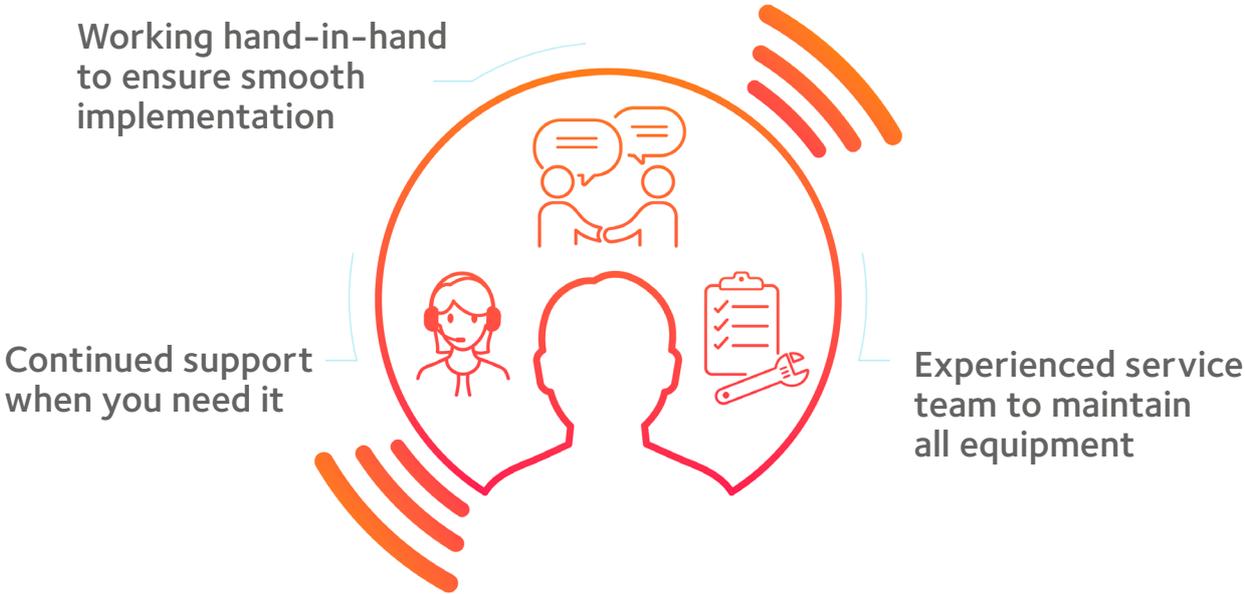


A study by Holmes et al. (2021) found 82.6% of embryologists felt that visual completion of the EWS dashboard provided peace of mind when leaving work and 84.8% were more confident knowing that all procedures were completed according to the EWS.¹⁵

Embryologists initially skeptical that an electronic witnessing system could replace human witnessing performed by experienced embryologists, reported lower stress levels and a calmer work environment after the introduction of RI Witness into their busy fast-growing fertility clinic.¹⁰

Case example: Nurture Fertility, UK

After the implementation of RI Witness in 2017, the clinic grew from 1,020 in 2016 (pre RI Witness) to 1,300 cycles in 2019 with 6.8 full time equivalent (FTE) lab staff – a 27.5% uplift. Within this period, the clinic saw a 16% increase in its embryologists’ productivity rate – a shift from 165 to 191 cycles per FTE per year.



RI Witness

Confidence, Efficiency and Trust

RI Witness Management System is the cornerstone solution for sample safety, efficient workflow management and as an auditing tool for quality control for fertility clinics.

Promote seamless workflow

- Real-time lab activity overview
- Compare lab efficiencies and performance data (clinic groups)
- Review workflow bottlenecks to increase efficiency

Support mismatch avoidance

- Continual automatic witnessing
- Patient identity connected to every gamete and embryo including cryopreserved samples
- Audible mismatch alarm and incident tracking

Say goodbye to manual double witnessing

- Accelerate ID witnessing for embryologists
- Reduce time gametes and embryos are outside of the incubator
- Cost savings for staffing, training, and procedure timings

Strengthen standards of practice

- Assign accountability
- Identify training requirements
- Standardize procedures across work areas or multiple labs



Support clinic management

- Clinic audits and real-time documentation available
- Records patient identification and information including consumables
- Link front- and back-end communications

Set-up team from start to finish

- Consultation and education meetings before installation
- Installation tailored to a lab's specific needs
- Access to training, regular meetings and follow-ups





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Want to know more?

Visit <https://fertility.coopersurgical.com/equipment/ri-witness/>

or

send us an e-mail at: sales@coopersurgical.com



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