

## Indira IVF adapts IoT technique in its embryology labs

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Indira IVF, a fertility chain in India, uses Internet of Things (IoT) technique in their embryology labs. With the help of IoT, sophisticated sensors and chips are embedded in equipments which monitors and records the valuable data and also transmits in real time. IoT systems are based on web, application or cloud and also represent data graphically for real time monitoring.

With this IoT technology, clinics can understand better how their system and equipment's are working. Indira IVF was the first player to install lab care quality control systems in India by installing the Labcare system in its Udaipur centre. And as of today, 42 main centres of Indira IVF are equipped with Labcare system.

In the process, IVF labs creates embryos which requires artificial womb and also factors like temperature, CO<sub>2</sub>, pH, humidity, etc. in lab as embryos are very susceptible to even minute changes in these conditions. With the help of IOT platform, it provides labs with accurate data, dual check point, data accessibility from anywhere and intelligent alarm systems.

The alarm system send notification via email, automated calls, SMS etc. to concerned person and in case of no response it can also be escalated to senior management. The data collected by an automated system with actual insights without any human bias helps in minimizing errors. This technology allows us to access and monitor data by sitting at home helping us to keep an eye on quality control 24/7 X 365 days.

Indira IVF is using two systems currently regarding IoT platform, firstly IVF Labcare system which take care of different specializations like lab care, lab health, Cyro sense, cold sense, freeze sense etc and secondly RI Witness system which ensure patient's confidence about the safety of gametes and tracks length of procedures , exposure of samples out of incubators and person handling the samples.

Speaking about IoT technique, Dr. Nitiz Murdia, Director Embryology, Indira IVF, said, "By using IoT, Indira IVF aims to provide quality care and quality treatment to the patients. For a large group like Indira IVF IoT adds versatility in its quality control and it not only also helps lab team to reduce its workload in a busy setup but also brings security and peace of mind

to IVF patients. We aim to reproduce future in present by embracing technology for benefit of not only patients or our organization but for society.”

Speaking about the same, Naval Shah, Head Embryology Quality Assurance, Indira IVF, stated, “IoT is a powerful tool which helps to analyze varied data of the entire group under one umbrella. This helps in monitoring lab and culture conditions that are very critical to human embryo growth and helps to produce excellent results. It optimizes efficiency of both lab and lab personals leading to Excellency.”

Apart from Indira IVF, RI witness system is presently installed only in 4 other centers of India. With regards to electronic witnessing system the RI witness system was first incorporated in to Indira IVF in November 2019. Since then this has been installed actively in 20 out of 42 centers and have the target to install them in all the main centers by May, 2020.