Cerba Research

The new big data application that is reshaping clinical trials

It's a familiar approach to innovation and entrepreneurship: someone on the shopfloor spots an improvement or better way of doing things that snowballs into a new business. Indeed, many big technology firms deliberately encourage this behaviour. But it's less common for a practising doctor to create a successful technology solution. But let that be the story of Adrien Ko, who hit the idea for his data-driven patient recruitment start-up while he was supervising a lab for Cerba Healthcare in France.

Ko picks up the story, over a three-person Zoom call with Pharmaceutical Technology and Mario Papillon, CEO of Cerba Research, a division of the Cerba Healthcare Group. "I was working as a doctor for Cerba in France for about five years," explains Ko. "They gave me the opportunity to develop my own project and my own vision of patient recruitment. The idea really was to link clinical research, with regular routine visits for patients."

Here, Papillon jumps in indicating that Ko is being too humble. "Adrien was taking care of a lab, coordinating the activity and doing the medical oversight of the lab. It was not digitalized at all and there were opportunities to optimise. Because he has a research background and a strong interest in technology, he saw an opportunity to kill two birds with one stone. He recognised that if you digitise the medical lab, you optimise the operation of the lab, which is a major advantage for running the lab, but you can also offer this as a service to the research industry."

The idea was simple, but effective. After a quick pilot in some of Cerba's French labs it has now rolled out into more markets. By digitising, and then gathering in a co-ordinated way, all the data generated by patients attending clinics and labs for routine medical tests, a huge database of patients has built up, which is being updated daily. The right information collected and stored in the right way, allows faster identification and recruitment of patients in clinical trials. While there are clear wins for the labs and the sponsors of clinical trials, there are also major positives for the patients.

Biography
Mario Papillon
CEO Cerba Research

Mario joined the Cerba HealthCare Group as the CEO of Cerba Research (formerly Barc Lab) in November 2017. A pharmacist by training, Mario has more than 25 years of experience in the pharmaceutical, biotechnology, and CRO industries.

About Cerba Research

Cerba Research is the result of the merger of Barc Lab, Histalim, and Cerba Xpert. All three entities are part of the Cerba HealthCare group and have decided to join forces under one name.

Cerba Research provides the highest quality specialized laboratory and diagnostic solutions while leveraging patient data and scientific insight to shape and advance clinical trials. With our global footprint and access to leading regional labs, data, patients, technology, and partnered resources, we support global biotech, pharma, and IVD organizations to improve the lives of

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Putting the patient first

As Papillon explains, a patient-first approach was a point of early connection between himself and Ko, "When I met Adrien, it was obvious we have the same interest in terms of the patient, and turning research to being more patient-centric. It's not about having to attract patients to the clinical trials, but to do it the other way around, to understand what the patient is living and bring the clinical trials to the patient."

This is the most appealing aspect of the new service. While it is clear labs and clinical trial organisers gain with this new technology, it has been designed and deployed in a way that it's about more than the data. As Papillon elaborates, "Of course this system really helps the staff at the lab. When they see a patient, they know straight away if the patient is eligible for a trial. That means they can engage directly with the patient, talk to them about the trial and explain what we're doing and so on. It makes it easy for the patient, because they're there having a blood test and are focused on this and we can discuss it with them, and they can see that we care for them and are providing all the services. This is about optimising the relationship between patients and clinical trials. It makes it more data-driven, but at the same time, it makes it much more human."

But it is also good for the trial organiser, because anything that eases the patient recruitment process is bound to be welcome. As Papillon explains, "The enrolment of patients is, by and large, very ineffective. Before this new approach, we would advertise and then review patient files, with everything being done manually. Then you connect the dots and maybe find a patient, but you need to follow up, call the patient and have the patient come in for blood tests and so on. The process is long, complicated, and not necessarily effective, especially when it's a complex trial."

With recruitment accounting for an estimated 30% of the cost of a clinical trial, and this service able to reduce the process down from weeks to potentially 24 to 48 hours, it's clear there are major cost benefits from this new approach. But for Ko and Papillon, even this cost reduction is second to the quality benefits it brings to patients able to have their voice heard in the process in a way that wasn't easy to accommodate previously.

A global solution

With Cerba's huge global network of labs and clinics across 20 countries, and some 25 million patients a month, Ko likens the database they are building to a living organism.

And with the accumulation of so much data in the modern age comes a huge responsibility to keep it as safe as possible from misuse or attack. While this is clearly a serious concern, it is not anything new or unique for a company like Cerba. Here, the doctor in Ko comes to the fore, as he takes a pragmatic view. "Of course, we need to be careful about all the data, but we need to have the data in order to heal your disease".

Papillon is clear that cyber security has to be the number one priority for any organisation handling this volume of patient data and while he is loath to tempt fate, he is confident that the new set of data isn't a new challenge for Cerba. "This is everyone's responsibility and it remains our top priority."

The perfect solution in a post-Covid landscape

Another risk that remains front of everyone's mind is Covid-19 and it's rare for any healthcare conversation to avoid the topic. Here, the pandemic has perhaps shown the value of a patient recruitment system built more on data and less on in-person patient contact. Recruitment for all clinical trials will be harder with patients reluctant or not allowed to visit healthcare settings, unless their data is already on record using the kind of big data screening system Cerba Research has developed.

Even as things return to normal, healthcare settings will remain congested for some time and removing the workload of finding the right patients from frontline healthcare workers seems another win.

An early example came as a client company was trying to organise a trial for a Covid-19 treatment, looking for patients with high risk factors such as diabetes or those aged over 65. But they were recruiting in hospitals looking for patients with this risk profile and a positive PCR test. But those with mild symptoms weren't going to hospital and after a year they had managed to recruit only 20 patients. Meanwhile, Cerba had patients coming to its labs with PCR tests and were able to recruit 10 patients in a month. As Ko explains, the doctors at the hospital were also really happy; "It was a great example of how private clinics and public hospitals can work together in a way that puts the patient first. Now they are talking about using the system for all sorts of other trials."

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And for both men, this new supportive, collaborative spirit within the health and pharmaceutical industry may yet be a positive legacy from the pandemic. "In order to really scale this project, we need to see it reach beyond just the Cerba network," admits Papillon. "Covid-19 has shown what is possible when the industry and wider healthcare sector collaborates, when competitors work together and collaborate for the benefit of all."

Free Whitepaper

A new paradigm for patient recruitment

Technology has transformed almost every aspect of our lives and can potentially offer the solutions needed to transform clinical trials if backed by sufficient investment and regulatory support.

We could, as a starting point, improve efficiency by moving from paper to digital recruitment. But this requires a complete rethinking and re-engineering of the clinical trial experience, focusing around the participant rather than the research site. While some trials could be entirely digital in a virtual environment, many will need a hybrid of virtual and clinical site-based activities.

This paper explores how Cerba Research is working to improve the clinical trial experience for patients, research sponsors and everyone else involved in the process. At the heart of this new approach is the more efficient and more effective use of patient data. Cerba is working with startup BioKortex to transform how patient data is collected and used to speed up and improve patient recruitment.

Clinical trials have the ability to transform health outcomes, but better use of data has the ability to transform how those trials are run, with the speeding up and improvement of recruitment a massive step forward.