

INSURTECH: HOW TO BUILD A NEW INSURANCE PRODUCT?

THE EXAMPLE OF GAIA, A LONDON-BASED STARTUP

BY **FLORIANE MOY**

Most startups start with identifying an issue and designing a solution to solve it. In our situation, Gaia started from a personal experience and aims at addressing a major health problem: infertility. Affecting one in six couples, infertility is the world's third largest disease globally after cancer and cardiovascular disease.

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Realizing that there has to be a better way to access fertility care was the key driver. Building a viable business is another step which requires raising capital, building a dedicated team and finding efficient distribution channels and partners. Insurance starts from the ability to predict the likelihood of risk and sharing it amongst a pool of people. However, it often suffers from conflict of interest and there is an opportunity to solve that problem in fertility care insurance.

FIRST MARKET: THE UK!

In many countries like the UK or the US, access to fertility treatment is not sufficiently covered by public funding. As a result, 75% of the people don't start the treatment they need because of money. Starting a company in the UK was a natural response for Nader AlSalim, Gaia's CEO, who experienced it in London: *'Gaia didn't come about as the result of some deliberate actions to build a business. It was a natural response to a horrible experience my wife and I had gone through in order to conceive our first child.'*

DEDICATED TEAM / TRYING TO THINK OUTSIDE THE BOX

Fair access to fertility treatment has never been solved before in the UK market. To reach this goal, we built a complete team that shares the motivation and is able to think outside the box: consider a solution, test it, maybe fail, and iterate on it, as in *'The Lean Startup'* book from Eric Ries.

For our business case, treatments are expensive and chances of success are low (25% chance of success at each cycle which costs £5,000 on average, according to the HFEA). Designing a viable solution is challenging so we had to find a way to predict the chances of success and assess risk: on this basis we can price an insurance product which reshapes the way people pay for IVF. This creative process and the risk of failure along the way can be hard to deal with, but there's also a certain thrill that comes with it for all the employees!

AN EMOTIONAL JOURNEY

Fertility is a sensitive topic and our members are vulnerable people that are going through a lot: some had difficult experiences in the past, many have high expectations regarding our solution and all will go through an emotional journey. Empathy is the main driver in the design of our product and we try to anticipate all edge cases. Gaining our members' trust and bringing them the peace of mind they need is a core priority here. This is why we decided to offer all our members complementary counselling consultations.

DATA AT THE CORE OF OUR PRODUCT

Here comes the actuary! The core of our product is our ability to use data to predict outcomes and underwrite risk. So our actuaries had to build a predictive model trained on more than a million of observations of IVF and ICSI rounds that are either fresh cycles or frozen embryos



FIGURE 1: HOW OUR PRODUCT WORKS

transfers. Using such data at a very granular level and applying machine learning techniques allows us to identify the impact of key metrics on IVF outcomes and to increase predictive performance. Thus, the product is driven by our model that uses personal and medical information about our members to predict their personalized success rates and offer them fertility at a fair and transparent price. Dealing with such sensitive data requires lots of attention to make sure its storage and access are safe and secure. Data anonymization in this context is completely core, as per the UK GDPR.

UNCERTAINTY AND RISK PROVIDERS

Insuring a new risk comes with uncertainty. Our product finances our members' IVF treatments and insures them against the risk of not achieving a live birth. Because of the lack of solutions today, only a small portion of

people get treated for infertility. The available data therefore does not perfectly reflect the patients' behaviors should they benefit from our plans. We also observe changes in the fertility market regarding the patients' demographic, the clinics' success rates, the medical techniques and recommendations. Fertility chances are predictable and our model's performance gives us confidence in our predictions, but it also needs to be closely monitored to account for potential data drift overtime. Therefore a key challenge for us is to harness large complex health data to accurately predict treatment outcomes and underwrite the risk. This enables to reassure our third-party, so that they can back us and further support the development of our startup.

COLLECTIVE EFFORT

It takes a team to create innovative ways to address the challenges ahead of us. We'll need to invent new tools, new ways to communicate and challenge our assumptions and stigma around fertility. This collective effort extends beyond the scope of our team as we must create new types of partnerships with providers (clinics), medical experts (doctors and nurses) and underwriters (insurers) - to give everyone a fair access to fertility care.

WHAT'S NEXT?

We are starting with our first product, that we could call our 'MVP' in the Lean Startup culture, serving IVF and egg donation before moving to other parts of reproductive health. Gaia

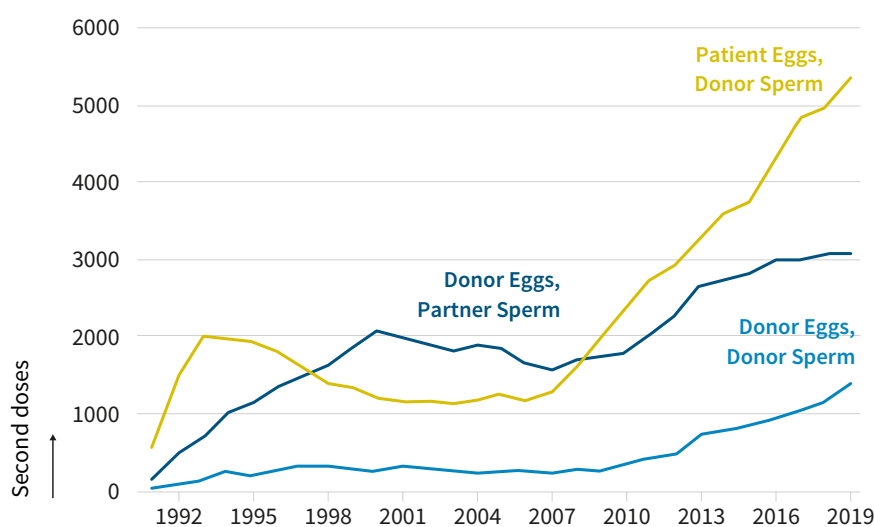
is about changing the norms around family building so we want to offer more people early options with regards to taking control of their decisions and insuring themselves from the financial unknown.

We will therefore have to grow our team and hopefully our

community of members on the journey so we collectively solve that problem at scale.

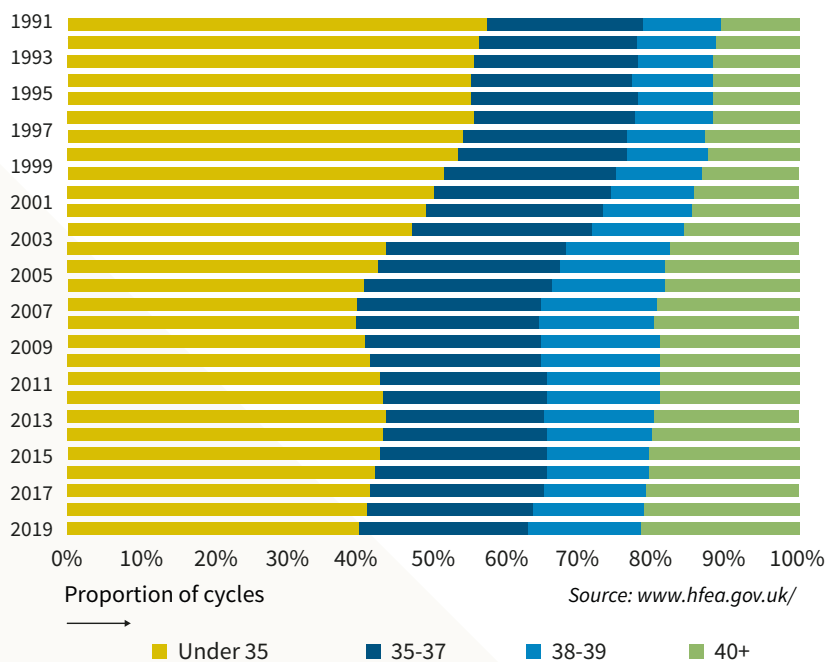
A natural next step for us will be expanding to the US as fertility markets have similarities, but that will take a lot of preparation and will be an even bigger challenge for all of us!

FIGURE 2: THE USE OF SPERM AND EGGS DONORS INCREASES
NUMBER OF IVF CYCLES BY EGG AND SPERM SOURCE (1991-2019)



Source: www.hfea.gov.uk/

FIGURE 3: THE PORTION OF OLDER PATIENTS INCREASES
PROPORTION OF IVF CYCLES BY PATIENT AGE GROUP (1991-2019)



Source: www.hfea.gov.uk/