

Opyl develops clinical trial prediction software using AI

- Opyl software predicts success and pitfalls in clinical studies
- Reduces risk of clinical trial failure, saving money and time
- Uses 'explainable AI', an emerging branch of data science
- Will be commercialised as a subscription model with additional bespoke consulting services

Melbourne, Australia, 19 February 2020, Opyl (ASX:OPL) today announced that it has successfully completed the first critical proof-of-concept stage of development of a machine learning/artificial intelligence algorithm based software interface which can predict the likelihood of a clinical trial completing each phase.

The software works to optimise clinical trials across study planning, protocol design, recruitment and site location through to selection of the best CRO (contract research organisation) for particular diseases in key geographic locations based on their historical performance.

The Opyl technology is based on information from over 300,000 published trials and more than 60 trial variables across a wide selection of diseases and conditions.

The application of an emerging branch of data science, 'explainable AI' has been used to develop the algorithm.

Michelle Gallaher, Opyl CEO said, "The Opyl algorithm has the potential to dramatically disrupt the clinical trial feasibility sector, reducing risk and cost to global biopharma and medtech developers. This technology has the potential to create more certainty in the typically risky clinical trial stage, which in turn means success worth millions if not billions to a biopharma or medtech company."

"The program has demonstrated its potential impact on specific variables on trial success such at the choice of CRO (contract research organisation), site (hospital), academic partners and dosing strategy, for example, Gallaher said. "Understanding how trial variables impact on outcome is a powerful competitive advantage for developers in designing the optimal protocol and for investors looking to reduce risk and optimise returns."

The Opyl model has estimated some trials as having up to a 70 percent chance of success, while other trials are as low as less than 1 percent.

Clinical trials are costly and high risk for health technology developers who risk hundreds of millions of dollars on each of the three phases of development. Only 14 percent of all drugs in clinical trials eventually pass and win approval from global regulators to launch on marketⁱ, with cancer studies having the lowest historical success rates. Clinical trials are often delayed as they compete for patient recruitment, and therefore improving the design and performance of clinical trials is key in reducing the cost of medicines and devices and ensuring the flow of capital into development is optimised.

The Opyl technology represents a significant milestone for the company as it pursues a new strategic direction in digital health.

While the primary market for the clinical trial predictor tool will be typically major biopharma and medtech developers who invest in large numbers of trials each year and seek to reduce risk, fund managers and investor will likely have a strong interest in predicting the likely success of their investments.

"We can work with all companies undertaking clinical studies across medical devices, pharmaceuticals, biologics and diagnostics to help them predict the outcome of their studies as well as improve the execution of the clinical trial through site selection, trial protocols, and CRO choice" said Ms Gallaher.

The tool could also give smaller developers confidence in their trial designs and may use the predictive approach to build confidence, attracting further investment and commercial partners.

It is expected the Opyl model will be commercialised on a subscription basis, with additional bespoke consulting services most likely aimed at pharmaceutical, biotechnology, government, hospitals, universities and research institutes, medical device companies, CRO's and investment houses. Opyl is in preliminary discussion with several organisations in this space.

Accelerating the development of the Opyl algorithm is a key priority for the company with the vast majority of the research and development budget earmarked for the next two quarters being applied to its progression toward an expected market launch in Q1 2020/21.

The Board has authorised this announcement for release to the ASX.

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Opyl is a new generation company working at the intersection of artificial intelligence, social media and healthcare. Our focus is on developing digital tools that improve the healthcare experience for patients, deliver deep market insights from social media data and improve the efficiency and value of clinical research process.

Our point of difference is the deep healthcare marketing and data science expertise of our diverse team and our understanding of real world data, particularly patient reported outcomes (PRO) and the continuous data and dialogue stream within social media.

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