# Opyl

# Annual General Meeting Investor Update

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30 November 2020

Artificial intelligence | Clinical trial design and recruitment | Social media

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# Overview

Opyl is a digital health informatics company operating the in the global healthcare sector

We applying artificial intelligence and predictive analytics to:

- Improve clinical trial design and reduce risk
- Accelerate patient recruitment to clinical trials
- Deliver deep real world insights from social media



"Digital transformation of clinical trials is critical to improving productivity - artificial intelligence will be the key driver"

**Deloitte - Intelligent Clinical Trials 2019** 

# Overview



Opyl is aiming to solve three major points of failure in the USD\$19.2Bn global clinical trials market:

- 1. Poor recruitment of patients to clinical trials,
- 2. Poor trial design
- 3. Poor insight into patient experience

Overview

# **Opyl solutions**

A scalable business model with three novel digital platforms and market intelligence capabilities addressing a large global clinical trials market expected to reach USD\$28.7Bn by 2025 growing at CAGR of 8.3%

Clinical trial recruitment platform

Clinical trial protocol design & prediction platform

#### Social media derived insights

86%

of clinical trials fail to reach recruitment targets on time or on budget\* **30k** 

Average number of clinical trials registered each year

91%

Participants in recent study\*\* reported online communities play a role in health decisions

33,198 clinical trials registered in 2020 (up by 38% since 2015)

Number of Registered Studies With Posted Results Over Time

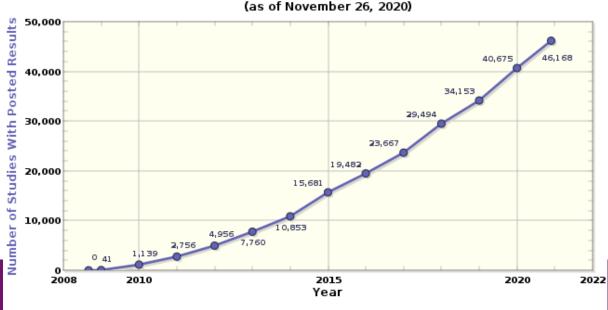
# Market opportunity

# USD\$19m

Median cost of a clinical trial (2018)

11-40%

Of the clinical trial budget is spent on recruitment and retention of participants



Source: https://ClinicalTrials.gov

Average cost per patient to enroll by trial type\*\*: Phase I USD\$15,700 per patient Phase II USD \$19,300 per patient Phase II USD\$26,000 per patient



# A year in Review: FY20

#### **Major Milestones**

- Rebrand from ShareRoot to Opyl digital health informatics focus
- Advanced clinical trial prediction/protocol design platform to proof of concept (Feb)
- Successfully delivered COVID19 clinical trial prediction data test (Aug)
- Advanced development of clinical trial recruitment and retention platform to MVP
- Secured 2 year, non exclusive revenue-share alliance arrangement with huumun (UK-based agency)
- Scale alliance (huumun) delivered 4 major insight projects with Bristol Myers Squibb with more in pipeline
- Revenue-generating client base expanded by 33%, despite initial drop due to COVID19
- Achieved cost neutral position in Q2 2020, as forecast brought forward R&D agenda
- Accessed \$249k in R&D tax Incentives
- Increased leadership experience and capacity appointing Mark Ziirsen to the board
- Increased management capacity, appointing three new roles including Sales and Marketing Manager
- Successful capital raise (June) applied to platform development and capacity expansion

# Looking forward: FY21

- Launch clinical trial recruitment/retention platform April 2021
- Launch clinical trial protocol design/prediction platform June 2021
- Build global sales and marketing plan for both platforms December 2020 to March 2021
- Secure scale alliances to accelerate clinical trial recruitment sales and platform adoption February 2021
- Develop and deploy 'customer success' team to support platform adoption and client satisfaction March 2021
- Grow sales revenue from social media insights projects huumun/Opyl Sales team
- Leverage government grants to support further research investment

# **Opyl Platforms**







Clinical trial protocol design & prediction platform

Clinical trial recruitment & retention platform

Social media insights & methodologies

# **Clinical trial protocol design & prediction - Platform 1**

#### Goal:

Improve design of clinical trials and success rates, and thus improve efficiency in execution and application of financial resources

#### **Objective:**

Use past clinical trial data (clinicaltrials.gov) natural language processing and 'explainable' Al to build a sensitive platform than can accurately predict the impact of trial variables, providing protocol design modelling and decision support for clinical trial designers.

#### Outcome: two market opportunities emerge

1. Clinical trial design decision support software - biopharma, medtech, medical research sector 2. Investment decision support software - Investment, insurance, commercisalisation and govt

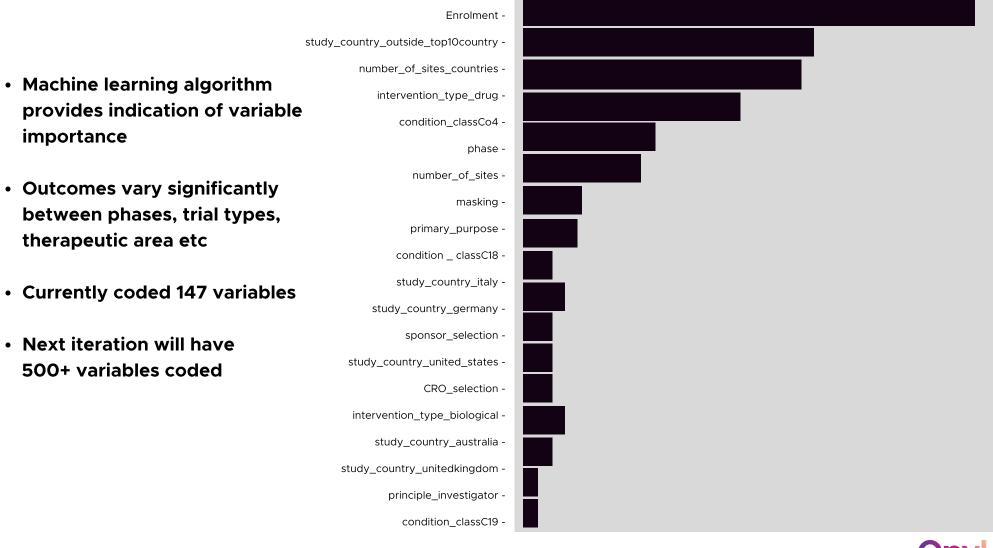
Algorithm development systems model Stage 1 300,000 + clinical trials ingested MVP Explainable AI to develop directional Stage 2 variable insight Back test 2016 - NYSE Pharma index Proof of concept Expansion of variables 145 - 500+ Stage 3 COVID19 data trial Web-facing platform development Beta client engagement Sales & marketing strategy development UX/UI enrichment Stage 4 Market launch - investment - biopharma/medtech

#### Scheduled for market launch Q4 2021

- 4 stage development plan
- Currently in stage 3 of platform development
- Accessing R&DTI
- Few competitors visible
- Two key markets investment and biopharma/medtech
- New revenue stream expected to come on line 2021
- Commercialisation opportunity 3 horizons
  - a) consulting model reports
  - b) platform licence seats
  - c) enterprise model

Potential to vastly improve the design and predict the outcome of clinical studies, reducing risk and improving ROI for investors and developers

#### Improving clinical trial design - evaluating protocol variables

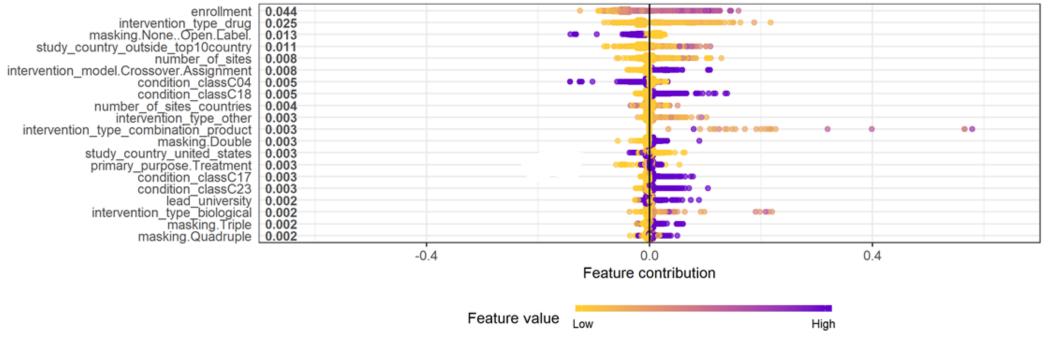


### provides indication of variable importance

- Outcomes vary significantly between phases, trial types, therapeutic area etc
- Currently coded 147 variables
- Next iteration will have 500+ variables coded

#### Improving clinical trial design - an 'explainable' model

- Uses emerging field of 'explainable' AI insight into impact if a variable is adjusted during design phase
- Novel predictive modelling feature significant value proposition, improving PoS
- Development of this feature is ongoing currently 147 variable but the target is now 500+
- Team of subject matter experts commenced development mid October 2020



#### Phase 2 feature contributions

# **Clinical trial recruitment - Platform 2**

#### Goal:

Improve recruitment to and retention in any registered clinical trial, in any global location, using artificial intelligence to match patients to trials based on volunteered health data.

#### **Objective:**

Design a system that uses social media as the funnel to attract patients to self select to trials, capturing volunteered data through the digital triage process that can be stored and leveraged (with consent) for further value. Revenue will be generated based on successful enrolment outcomes. A digital recruitment platform will further enhance and add scalable value to the existing service offering already operational within Opyl

#### **Outcome:**

A web based interface that disrupts the current recruitment revenue model. Based on success fee, the Opyl model can recruit to any registered trial anywhere int he world in any therapeutic area. Social media and SEO expertise is criticial to the platforms success.

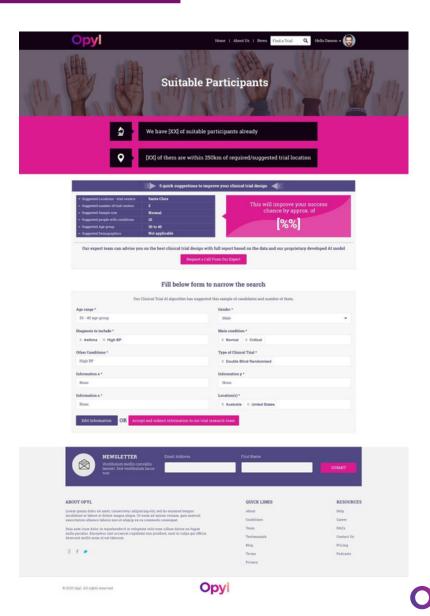
**Opyl services currently using social** media to recruit to trials Stage 1 **Build initial client base** Identify public data sources **Design web-based platform model** Stage 2 **Competitor analysis** User journey mapping User testing Stage 3 Marketing and sales plan Integrate with existing Opyl service

#### Currently generating revenue; next generation platform launch 2H 2O21

- 3 stage development plan
- First stage is to open recruitment services via Opyl team
- Currently in stage 2 of platform development
- Accessing R&DTI to support development
- Global solution
- Multiple health sectors covered
- Potential for greater automation and scale
- Point of difference is recruitment via social media and self select model
- Volunteered data asset
- Complements Platform 1 offering marketing to same clients
- Currently only 13% of clinical trial use social media to recruit
- Opyl's inhouse marketing expertise is key to success

#### Improving clinical trial recruitment - patient activated

- Patients self select and set filters to match their preferences
- Patients volunteer key health data related to trial eligibility
- Patient data is encrypted and stored
- Patient offered valuable information about relevant research study opportunities
- Patient sent push notification is a trial becomes available and matched their filters
- Pathway for healthcare providers to refer patients
- Pathway for sponsors, sites or CRO's to sign up a trial

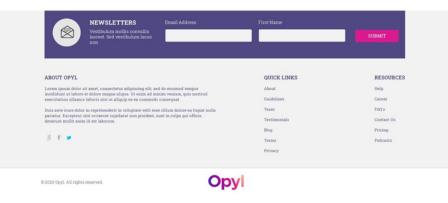


#### Improving clinical trial recruitment - social media as the funnel



#### We have found below trials that could be suitable

| Recruiting | Elevatel An Elderly Breast<br>Cancer Cohort Study                     | Breast Cancer                             | Behavioral:<br>Observational cohort                                       | Brigham and Women Hospital<br>Boston, Massachusetts, United States  Dana-Farber Cancer Institute<br>Boston, Massachusetts, United States |
|------------|-----------------------------------------------------------------------|-------------------------------------------|---------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| Recruiting | Olaparib + Sapacitabine in<br>BRCA Mutant Breast Cancer               | Breast Cancer                             | • Drug: Sapacitabine<br>• Drug: Olaparib                                  | Dana Farber Cancer Institute<br>Boston, Massachusetts, United States  Broad Institute of MIT<br>Cambridge, Massachusetts, United States  |
| Recruiting | Topical Calcipotriene Treatment<br>for Breast Cancer Immunoprevention | Breast Cancer                             | Drug: Drug: Topical<br>Calcipotriene Ointment  Other: Topical<br>Vaseline | Massachusetts General Hospital<br>Boston, Massachusetts, United States                                                                   |
| Recruiting | SABER Study for Selected<br>Early Stage Breast Cancer                 | Breast Cancer  Early-Stage Breast  Cancer | Radiation: Stereotactic<br>Ablative Breast<br>Radiotherapy                | • University of Miami<br>Miami, Florida, United States                                                                                   |
| Recruiting | Topical Calcipotriene Treatment<br>for Breast Cancer Immunoprevention | Breast Cancer                             | Drug: Drug: Topical<br>Calcipotriene Ointment  Other: Topical<br>Vaseline | Massachusetts General Hospital<br>Boston, Massachusetts, United States                                                                   |
|            | 4.9                                                                   | revious 1 2 3                             | 4 5 Next •                                                                |                                                                                                                                          |



- Opyl services expertise designs targeting strategy via social media and creates all 'paid' content
- Revenue based on success model with modest up
  front project set up fee
- Opyl's existing services team have expertise in clinical trial recruitment
- Opyl uses proprietary social media listening tools and methodologies to identify primed populations with interest in research in specified health area
- Scalable, semi-automated solution
- Competitive and complimentary solution
- Data becomes an asset

## Social media insights - Platform 3

#### Goal:

To identify and utilise patient reported outcome measures and insights related to health shared to public social media, supporting marketing and sales objectives with health clients and in support of clinical trial recruitment

#### **Objective:**

Use a suite of proprietary and licensed-in listening technologies combined with is scalable and consistent analysis methodology to deliver unique validated health market intelligence to clients.

A combination of proprietary artificial intelligence to capture and analyse public data and use of a number if licensed-in listening tools. The Opyl methology and analysis is undertaken by the highly experienced Opyl services team delivering unique, validated evidence supporting sales, marketing, advocacy, regulatory and innovation objectives with clients.



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# Summary

- Opyl targeting the \$USD198Bn clinical trials market
- Launching 2 key digital platforms in 2021 new revenue streams
- Opyl has clear market advantage through expertise in digital health marketing & Al
- Driving scalable business through existing and new platforms and services
- Scaling up the team as we scale up the business in 2021