Category: Trial Recruitment & Disparities Research – Work in Progress

C3OD, An Abstraction and Recruitment Tool

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1. Background

Clinical trials remain the best avenue to establish the efficacy of newly proposed interventions. However, recruitment, retention, management, and execution of clinical trials have numerous associated challenges that can impact successful completion. From feasibility analysis, to enrollment targets, there are quantifiable barriers to trial recruitment that arise in part from the manual process of screening candidates. Examples include the need to manually review medical records including information from multiple locations, the need to consider complex recruitment criteria for a multiple trials, and overburdened care-providers. Additionally, clinicians expressed the strong need for the patients to be identified BEFORE their date-of-service so they and clinical trial staff can engage them during their appointment. Thus, it is critical to provide more automated solutions to pre-screening that can efficiently facilitate recruitment.

2. Goals

Our goals include improving the efficiency of clinical trial development through delivery of improved feasibility analysis and improved management of clinical trials through automated pre-screening of candidates.

3. Solutions and Methods

Out of the many different modalities that are being employed to address recruitment obstacles, we are attempting to design a *technical* solution to the prescreening process with both; rate (of recruitment), efficiency, and accuracy as drivers. We have designed a curated database called C3OD, with which we are able to fulfill requests for identifiable and actionable patient data underlying those numbers.

In this use-case, we are addressing the arduous prescreening process by reducing the total number of potential study participants with which our coordinators must abstract data by delivering a curated (and drastically reduced list) of potential participants that meet study criteria. Additionally, this list incorporates the extra dimension of future-visit dates-of-service and is being delivered to our coordinator team prior to when the patient is being seen by the physician. This process allows time for additional abstraction of outlier criteria. Moreover, we have automated the generation and delivery of said list on a recurrent basis and delivered via secure means.

4. Outcomes and Future Directions

Below is a table of our first 9 patient extracts. Patients identified by study inclusion/exclusion that have future physician visits vs. the number of total patient charts that would have needed to be extracted without the use of C3OD

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Extract No.	Total Scheduled	Total Identified	Percent Identified vs total
1	469	16	3.41
2	480	12	2.50
3	424	11	2.59
4	376	8	2.12
5	556	9	1.62
6	451	8	1.77
7	482	11	2.28
8	503	13	2.58
9	402	8	1.99

Total number of Extracts	9
Total Scheduled Patients	4143
Total Identified Patients by inclusion-exclusion	96
Average Percent Identified vs Total	2.31
Number of enrolled patients	1
Estimated productivity cost savings	TBD
Number of additional trials able to start recruiting a direct result of time savings	3

Address lessons learned and future directions:

During the initial roll-out, we have identified some critical areas-of-opportunity for future developmental efforts. These include hardware and software improvements, data source management and growth, UI development and the need for additional human resources to support and improve C3OD.