Visualizing a Seamless Clinical Trial: The Ideal Model for Clinical Trials of the Future

Considering that the innovation of technology has boomed in the last half a century at a stunning pace, it's always surprising to remember that the process of drug development still holds an average of 8-10 years before a drug can be approved for worldwide human consumption.

The clinical trial process is long and complex, relying on a wide range of data needing to be collected, analyzed, and applied to the production of a drug. Besides being time-consuming, it is also extremely expensive, as the cost of the process averages at about $2.5 billion. More importantly, it's a process that is 100% unavoidable.

However, future prospects of greatly reducing the longevity and cost of this process are looking more likely. For many years, disruptive innovations in the field of drug development have been presented and even deemed as revolutionary, but more often than not, were not put into practice.

As nice as the idea is of speeding up the process of clinical trials, the comfort of currently accepted methods and the cost of change often keeps companies from adopting new, more efficient methods. The COVID-19 pandemic could be a big part of changing that.

A clinical trial process takes a long time because the pharmaceutical industry wants to implement as many safeguards as possible before introducing a new medication for human consumption. After the initial studies and animal trials, drug developers need to understand what type of effect the new drug will have on human physiology.

The clinical trial process involves a four-phased process of introducing a drug to various sized groups of people, healthy and those with the treatable disease, then the drug is compared against existing treatments and eventually released to a large sample group. All phases require time for the results of the drug's safety and effectiveness.

So what does an “ideal” process look like for a seamless clinical trial then? Simply put, it would be more cost-effective, have a quicker turnaround, a more robust tracking system, faster trial subject gathering, and increased safety of those involved.

One of the biggest gains being currently made is in the area of data collection. Technology has allowed people to be able to wear, carry, implant, and even “digitally tattoo” equipment on their person to track anything from blood sugar levels, sleep patterns, weight, respiration, and many other health metrics.

The ability to gather data “real-time” makes life easier for the research & development part of the process as they can collect and sift through the data, and when they are done with a particular data sample, they have a lot more ready to be studied. This will make it easier to identify patterns critical during trials.

There is a lot to be said for expediting the clinical trial process as well. One of the most time-consuming parts of getting the trial moving along is the selection of participants for various phases. A lot of times can pass while parties deliver their consent, come in to sign all appropriate paperwork, and then get set up for periodic check-ins about their condition on the drug in the trial. Many initiatives are being made to streamline the consent process with new eConsent tools and eCRF.

As mentioned earlier, the collection of data is already making waves, not requiring patients to come in, but rather be monitored remotely with real-time data. The technology for managing payments to participants will also improve with necessary payment management tools making it easier to distribute funds earned.

One concept that is already being adopted on a wider scale globally is the idea of information sharing. While it is understandable that pharmaceutical companies need to invest into the success of the drug they are producing, and revealing their findings to their competitors will potentially put them behind in the drug’s eventual distribution, most are accepting that the way to more quickly tackle the world’s diseases is to work cooperatively and share the information.

That is the ultimate point of the entire business, is it not? This not only helps other drug varieties produce quicker, but it also expedites the process of clinical trials when everyone knows what to look for in their collected data.

This connects directly to the cost of the R&D process. The biggest cost associated with drugs is their potential failure in the trials. At that point, so much money is invested that failure is financially crippling. Adapting newer technological solutions will help gather more information, more accurately, and allow drug manufacturers to more accurately tailor all phases of the drug trial.

With more knowledge about the trials, more safety for those participating in the trails will be achieved as well, and certainly the public once the drug goes on the market. Having more information will open up trials and will help in trial enrollment when the participants can be qualified for it remotely. This cuts out having to visit a particular site for the trials to be conducted, which can be a major hold up in the process.

Artificial Intelligence, Electronic Health Records (EHR), and interoperability are already a focus of the pharmaceutical industry. Once many new innovative, disruptive ideas begin to be implemented the sky's the limit for how much the clinical trial process can be sped up and how

many currently devastating diseases we can tackle together as a global society. The industry just has to be open to change.

If you are interested in learning more about the ideal model for clinical trials of the future, you can fill out our contact form and book a demo of our cloud-based software.