

## Technology driving clinical trials: To the patient for the patient

**Garun Yadav**

Syneos Health Clinical Solutions, India

One industry that was a pinch late in reacting to this fourth industrial revolution was the one that touches a living being the most, that is, Clinical Research. However last decade has been encouraging. Tech giants, including Microsoft, Google, and Tencent, have invested a record \$11B+ last year in 38+ digital healthcare start-ups. These investments are distributed fairly into a spread of domains, with maximum towards Data Management and Analytics, Genomics, Wearables, Clinical Research, Remote Patient Monitoring, and Telemedicine. These developments are paving a way for digital innovation in clinical research. Two enduring outcomes of digital healthcare are 'Virtual Trials' and 'Patient Centricity' that are stirring and taking clinical trials 'To the Patient, For the Patient'.

**Virtual Trials:** Debatably first coined in 2003, as Internet-based/Remote trials, Virtual Trials are new-generation trials that allow a patient to participate in a clinical study without visiting a clinic to complete outlined protocol procedures. A breakthrough came in 2011 with Pfizer's virtual trial on tolterodine. Consecutively, the top 10 pharma's have embraced the use of technology in driving the clinical trials virtually as compared to their traditional alternatives. The industry has progressed in bringing trials to patients' homes using powered technologies with central virtual coordinating centers. The use of digital health, including mobile health applications, wearable devices-sensors, digital biomarkers, integrated data platforms, real-world evidence, and electronic health records, has brought in new trends in the process.

- Physical to eRecruitment Paper to eConsent
- Paper to eCOA/ePRO
- Paper/Manual to eSource
- Clinic to Telemedicine
- Clinic to Wearables/Sensors:
- Clinic to Remote Monitoring
- Cloud/IoT Data Integration and Analysis

**Patient Centricity:** New healthcare strategies, current age technology, and decentralized trials have been a game-changer in empowering the much-needed Patient Centricity in clinical trials. These trials provide the following benefits to patients leading to greater patient satisfaction and centricity.

- Flexibility
- Less Travel
- Uninterrupted Engagement
- Greater Patient Reach
- Home comfort
- No tracking and recording of procedure/data.

Overall, looking at promising outcomes like virtual trials and patient centricity, digital technologies have the potential to completely transform the entire clinical research process.

### Biography

Garun Yadav as an Associate Director leads Syneos Health's data management team to help sponsors build and conduct their clinical trials faster. With 14+ years of experience, Mr. Garun brings extensive expertise in data management solutions. He started his career as lab data manager in 2006 and handled many roles in his career including start-up data manager, lead data manager, and Oncology SME. His functional focus spanned around CRF design, study start-up, external data handling, data validation, clinical programming, analysis, and reporting. In 2016, he started leading an FSP 360 team and currently continuing to provide leadership to the group. Garun also worked at Kendle data and technologies, TATA Consultancy Services, and SIRO Clinpharm. He earned his Bachelor's degree in Microbiology from Mumbai University and holds a Master's degree in Healthcare Administration from Sikkim-Manipal University.