Bridging the Digital Divide: Empowering Clinical Trials Offices for Decentralized Clinical Trials

Can digital tools powering decentralized clinical trials help streamline research workflows, enhance trial quality, and promote more equitable access for minority patients—or do they risk delaying trial workflows and deepening disparities in clinical trial participation?

Teena Kochukoshy's dissertation investigates how digital technologies reshape the day-to-day work of clinical research operational offices that support clinical trials. She surveyed 160 clinical research professionals from more than eighty cancer centers, capturing data on digital tool adoption, perceived outcomes and organizational context. Likert-scale responses were analyzed with hierarchical multiple linear regression and checked for multicollinearity to ensure robust estimates.

In Study 1 digital adoption is measured as the extensiveness of tools in use, ranging from electronic regulatory binders to full telehealth, wearables and remote monitoring suites. Higher adoption predicts a statistically significant decline in reported staff turnover, controlling for site size, location and cancer-center type. However, the same model shows non-significant trend toward lower minority patient accrual, suggesting that technology alone does not overcome structural barriers to participation.

Study 2A shifts the focus to digital maturity, which was defined as the depth of integration of those tools into daily workflows. Clinical trial operational offices reporting the highest maturity levels see better data quality which likely reflects automated validation and real-time dashboards. Yet these offices also report longer study start-up timelines, a trade-off attributed to intensive configuration, compliance checks and staff onboarding.

Finally, Study 2B analyzes open-ended comments using thematic coding. Three themes dominate: one-size-fits-all software rarely fit complex clinical trials operational workflows uniformly; practical aspects of tool implementation, including user adoption, training, and system integration play pivotal roles in the success of digital tools adopted by offices; frontline users are infrequently involved in tool selection. In conclusion, respondents emphasize that digitalization delivers real gains only when there is invest in purpose-built digital solutions that align with organizational needs, robust change management and equity-focused recruitment strategies.

MAJOR TAKEAWAYS:

- Digital tools cut turnover, yet minority enrolment slips unless outreach strategies keep pace.
- Deeper integration improves data quality but pushes start-up timelines longer.
- Training, local customization and user voices decide whether digital platforms succeed.

WHO NEEDS TO KNOW:

- Clinical Operations Leaders
- Clinical Trials Researchers
- Digital Solutions Vendors

CONTACT US:

- Teena Kochukoshy, MD, Doctor of Business Administration. *katna07@gmail.com*
- Dissertation supervisor: Subodha Kumar, Chair Professor of Statistics, Operations, and Data Science. *subodha@temple.edu*

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