HealthManagement
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Overcoming Technology Overload in Clinical Trials

The clinical trial landscape has greatly benefited from technological innovations over the past few decades. Innovation has expanded remote monitoring capabilities, patient recruitment tactics, and the decentralisation of clinical trials. However, one of the greatest hurdles clinical researchers currently face is a deluge of disparate solutions across the clinical trial workflow. Surveys reveal that 60% of clinical research sites use up to, and over, 20 systems daily. This technology overload is causing immense complexity, leading to increased staff burnout, reduced site capacity, longer research timelines, and fewer treatments for patients in need. This article explores the impact of technology overload and suggests an ecosystem approach to alleviate the burden on clinical research sites.

Technology Overload: A Double-Edged Sword

The abundance of technology and vendors in the clinical research landscape creates a complex environment. Researchers frequently cite accessing and managing multiple sponsor systems as a top challenge in conducting and completing clinical trial research. Despite nearly doubling research and development spending on clinical services and technology, many operations are recording longer study timelines with little to no improvement in outcomes. This is often due to added complexity brought on by multiple solutions. The challenge of navigating multiple vendors and systems due to varying sponsor preferences is contributing to a serious bandwidth issue in clinical trial research, directly impacting the number of new treatments that can be studied.

Burnout, Trial Delays, and Reduced Capacity

A primary implication of this complexity is clinical staff burnout and subsequent turnover. Clinical research professionals frequently cite a high workload as a primary factor in burnout. Research shows that work overload triples the risk of burnout in the healthcare setting. Navigating between systems to accommodate varied sponsor-specific requirements undoubtedly adds to the already strained workload. The rising complexity brought on by increased technology utilisation is causing higher rates of trial delays, which increases costs and adds to the already overflowing backlog of clinical trials. Recent reports suggest that 1 in 5 trials are delayed by more than 40% of their original timelines. This administrative burden stretches clinical timelines and budgets, potentially affecting further research and access to treatment. Trial timeline delays and workforce shortages indicate that the industry's capacity to run clinical trials has reached its limit, with an expanding backlog of new trials awaiting activation across sites.

An Ecosystem Approach to Alleviating Technology Overload

To address this burden, organisations must understand where technology has a positive impact and prioritise solutions that alleviate – rather than add to – the complexity of site operations. The problem of too much tech has become too large for any individual stakeholder to solve alone. Pharmaceutical sponsors, contract research organisations, and technology vendors must move beyond their own studies and products toward a solution that pulls the clinical trial ecosystem together for site personnel. A single sign-on solution that works only for its own trials or products slightly reduces the burden on sites. Alleviating technology overload requires a means to aggregate, connect, and communicate across the wide range of key systems used in all phases of clinical trials. A personalised dashboard providing complete visibility of studies, sponsors, and systems allows sites to navigate seamlessly across the technology ecosystem and gather a comprehensive picture of their clinical trials.

Clinical research stakeholders must prioritise a single sign-on solution as the first and most important step to alleviating the burden of multiple applications. Reducing site burden will help the industry increase clinical trial capacity, accelerate research timelines, and improve patient outcomes. With a home base from which to start, sites can spend less time navigating dozens of systems and more time conducting research. This enables sponsors to accelerate trial timelines, enhance data quality, and improve operational oversight. At the same time, technology vendors can continuously advance innovations and improve usability and functionality. By leveraging technology that provides benefits instead of burden, the industry can return to optimising trial performance and improving patients' lives.

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Published on : Thu, 11 Jul 2024

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