Category: Training, Career Development, and Staff Retention – Completed project

Clinical Research Coordinator User Experience Across Multiple Health Information and Electronic Data Capture Systems

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1. Background
Following the shift from paper source and documentation to electronic records in health care and clinical research, clinical research coordinators (CRC) navigate multiple electronic systems to manage clinical data. Today, clinical research staff who manage data often manually extract information from multiple databases, including Electronic Medical Records (EMR), then enter it in an organized way into the sponsor's electronic data capture (EDC) system(s).

In the past few years, clinical trial sponsors have started to develop and test data abstraction technology to streamline data collection. This study explores CRC system-to-system interactions in the current manual data workflow to assess CRC end-user experiences and preferences.

2. Goals
The primary goal of this study was to map clinical research staff interactions between electronic data systems at a large academic cancer institution. The institution has a data map to demonstrate the general directionality of data flow; however, it only includes internal applications and doesn't map system-to-system user interactions. The study objectives were to 1) map system-to-system user interactions and 2) evaluate CRC user experience satisfaction.

3. Solutions and Methods
In February 2024, we conducted five user interviews with CRCs at the UAMS Winthrop P. Rockefeller Cancer Institute. Each interview lasted approximately one hour. The CRC experience ranged from 6 months to 18 years.

4. Outcomes
The CRCs reported using an average of 14 systems and applications for clinical trial data collection and entry. The CRCs reported using an average of 8 internal applications and systems and 6 external systems. The lowest number of systems and applications reported was 8 and the highest number reported was 20. The number of systems and applications is likely higher since the responses were based on immediate recall. During one user interview, the CRC navigated between 8 applications and systems and 2 paper resources to enter data for one treatment visit.

During the interviews, for some of the data entry tasks, CRCs had to take an additional step between data collection and entry to prepare the data for entry such as performing conversions, calculations, assessments, and translating findings. Some of the data entry preparation steps could be eliminated by adding simple logic to the sponsor's EDCs.

5. Lessons Learned and Future Directions
The study's findings are in alignment with industry data indicating a high burden on CRCs due to the number of systems required to navigate and highlights it as an ongoing issue. We hope the findings will encourage collaboration among research institutions and clinical trial sponsors to limit the number of

applications and systems required to manage clinical trial data. In the future, the results of the study will be used to advocate to improve the CRC's user experience.