Integration of Electronic Health Record (EHR) Systems with Electronic Data Capture (EDC)

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BACKGROUND

This revolutionary tool will drive the future of research by increasing efficiency. Integrating electronic health record (EHR) systems with electronic data capture (EDC) technologies streamlines clinical data management and enhances operational efficiency.

EHR to EDC technology facilitates the seamless transfer of data, minimizing manual data entry errors and reducing workload.

FIGURE 1.

A cloud-based application that utilizes LOINC mapping to bridge EHR and EDC systems.

Past attempts to implement this technology have faced challenges with timelines, user adaptation, and scaling across different protocols and sponsors.

GOALS

1. Evaluate the effectiveness of facilitating EHR to EDC data capture across participating cancer centers.
2. Measure staff satisfaction.
3. Quantify time savings and data quality.

SOLUTION AND METHODS

- **Integration**: Facilitate seamless data transfer from EHR to EDC, minimizing manual data entry errors and reducing workload.
- **Challenges**: Multiple vendors and need to consider if the vendor is EHR agnostic, EDC agnostic, and Sponsor agnostic. Adoption and implementation can encounter challenges in terms of timelines and user adaptation across cancer centers.
- **Evaluation**: The project evaluates the effectiveness of EHR2EDC transmission in various cancer centers.

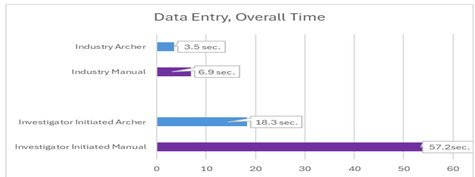
OUTCOMES

Implementation Variability: Implementation varies among cancer centers, reflecting their internal processes.

Positive Results: Significant reduction in time spent on manual data entry and monitoring queries.

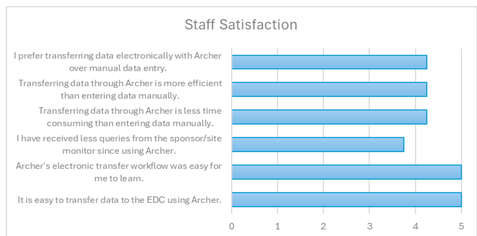
Preliminary Data: Notable decrease in data input time and improved data quality.

FIGURE 2.



Staff Satisfaction: Surveys reflect increased satisfaction regarding data accuracy and ease of use.

FIGURE 3.



LESSONS LEARNED AND FUTURE DIRECTIONS

Optimized Timelines: Future implementations will benefit from optimized timelines and enhanced training protocols.

Capability Development: Further development of EHR to EDC capabilities beyond labs, vitals, and con meds to adverse events and other unstructured EHR data.

Data Analysis: Analyze data collected across cancer centers to share data accuracy improvements and long-term impact on clinical trial timelines.

Broaden Adoption: Broaden the adoption of EHR to EDC across various sites and sponsors, enhancing automation capabilities and enabling staff to perform at their peak expertise.

CONCLUSIONS

The integration of EHR with EDC-shows promising results in improving data management efficiency and accuracy. Continued evaluation and optimization will further enhance its adoption and impact on clinical research.

REFERENCES

Buckley M, et al. A System Agnostic and Secure Platform to Exchange Clinical Research Data Via HL7-FHIR From Site to Sponsor to Increase Efficiencies and Satisfaction [poster abstract]. In: AACI: CRI Annual Meeting 2024; June 24-26; Chicago, IL. https://doi.org/10.1234/aaci2025-P123https://www.aaci-cancer.org/Files/Admin/CRI/2024