CARDEA HEALTH
Cardiac Data Evolved

Utilizing Unstructured Data in EMRs for Clinical Trial Patient Identification: The Human-in-the-Loop Approach

Electronic Medical Records (EMRs) offer a rich source of patient data, but a significant portion remains unstructured. Current industry data suggests that over 80% of data in EMRs is unstructured. This means that many care providers are dealing with vast amounts of information that may contain essential clinical and operational insights.[1] Organizing this data, especially clinician notes, lab reports, and diagnostic summaries, can yield valuable opportunities. Structuring this data can be especially useful for outpatient cardiology clinics in identifying suitable candidates for clinical trials.

1.**Detailed Patient Profiles:** Structured data provides a clearer view of patient profiles. This organized format can reveal important insights hidden in the unstructured data. By implementing NLP (Natural Language Processing and OCR (Optical Character Recognition) we are now able to structure this data.

2. **Efficient Patient Matching:** Structured data can be more easily analyzed by algorithms. This speeds up and refines the process of matching patients to specific clinical trials.

3. **Time and Cost Savings**: Manually searching through unstructured data is time-consuming and costly. It is estimated that identifying patients that meet both inclusion and exclusion criteria manually can take up to 4 hours per patient. [2]

4. **Increased Data Accuracy:** Structuring data significantly reduces errors and ambiguities, making patient-trial matches more reliable.

The Human-in-the-Loop Advantage:

Even after data structuring, incorporating a 'human in the loop' review can be beneficial. Algorithms are precise, but human oversight ensures a contextual understanding of the data. This combination results in data that's both accurate and relevant, ensuring that patient allocations for clinical trials are appropriate and well-informed.

In conclusion, as outpatient cardiology clinics work to improve patient care, the structured utilization of EMR data, combined with a human-in-the-loop approach, offers a promising path forward. This approach not only optimizes data use but also ensures that clinical research decisions are well-informed and patient centric.

Written by:
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[1] https://www.accenture.com/us-en/blogs/insight-driven-health/unleashing-the-power-of-unstructured-data
[2] https://deep6.ai/resources/interview-with-clinical-research-coordinator/

About Cardea Health

Cardea Health Inc. is revolutionizing how patient data can be utilized by Cardiologists engaged in clinical trials, research and optimization clinics. The mission of Cardea Health is to provide real time actionable insights on a single pane of glass so that physicians can improve the quality of care for cardiac outpatients. Cardea Health was founded in 2021 by Mr. Naveed Ahmad, a serial entrepreneur and Dr. Andrew Yadegari, an Interventional Cardiologist with the Scarborough Health Network. Cardea Health is located in Toronto, Canada.

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