Leveraging Clinical Data Exchange & FHIR to Optimize Medical Chart Requests with EMR Systems w/Blockchain

Cerner HDX TS and Edifecs Smart Trading Solutions

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Today, most payer organizations require medical charts from provider organizations. Medical charts are used in the payer organization for multiple purposes, such as for risk adjustment reporting, HEDIS measures, and to create a comprehensive risk and quality measures.

The process of requesting, collecting and processing medical charts is extremely expensive and burdensome. Despite Meaningful Use (MU) 1, MU2 and proliferation and use of EMR, the process remains manual and paper based. Cost of collecting medical charts is typically outsourced to 3rd parties which specialize in this process and charge in the range of $30 to $127 per medical chart, many times based on number of pages.

Cerner and Edifecs are exploring a proof-of-concept to automate the medical chart review request and retrieval process and bring the cost to a fraction of what it costs today. The concept works within technology and standards (HIPAA x12 & FHIR) that already exist to automate the process. It is a matter of applying the technology and standards along with partner vendors that can represent health plans (Edifecs) and providers (Cerner).

A demonstrable prototype is under development leveraging a blockchain implementation to provide security and auditability for clinical data exchange. The general concept is to interact with a blockchain cryptographic hash function during claims transport processing to create a unique hash key as a token. This token can be used to provide access to view clinical data specific to a claim and/or to invoke a clinical data transfer to be uploaded into a payer's analytics system for detailed, automated review.
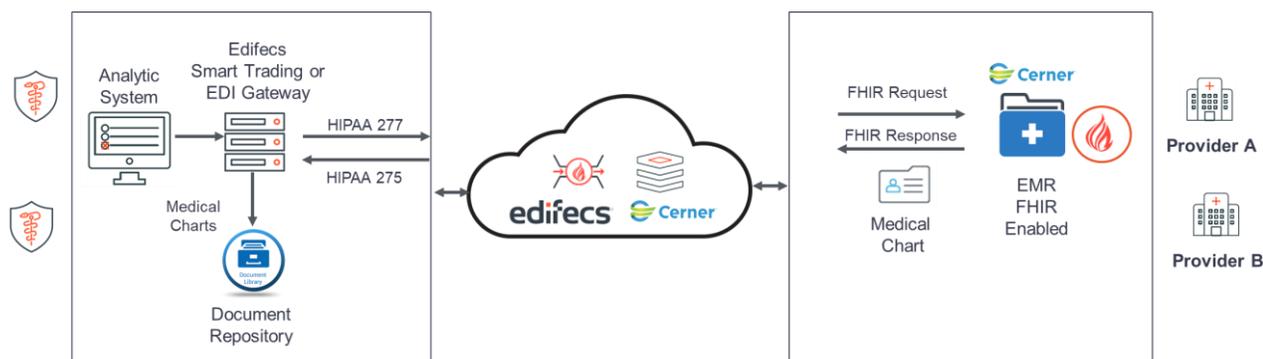
Our desire is to use this proof-of-concept to provide a deeper understanding for a commercial implementation.