

Healthcare Innovation

NEWS

Digitalizing Health Records, Patient Chart Data

by Scott Finfer

The digitization of health records and patient chart data amounts to a fait accompli. Neither its supporters nor its detractors ever genuinely had a say in the matter. It was simply the next technological step: The road to healthcare's future will not be paved with paper. Because no one in history ever took a step forward by arguing in favor of obsolescence, why then is this rush to digitization not necessarily the rosiest of news?

At the core is the false assumption that the digitization of a record system, once put in place, would naturally translate into a more efficient workflow and improved outcomes. This, however, is not a given and indeed, often times not the case. In 2016 after five trying years of seeing their digitization adversely affecting healthcare for thousands of active troops and civilian members, the U.S. Coast Guard opted to terminate its electronic health record (EHR) contract and revert back to paper-based care.¹

New York City-based Health and Hospitals Corp. inked its own \$302 million, 15-year EMR contract in 2013, that was expected to be financed by federal funds and to cover the entirety of implementation costs. Once in motion, the process was hindered by major delays, and the budget swelled to more than \$760 million, with some estimates expecting the figure to rise more.²

While the above examples are by no means isolated, recurrences of them are avoidable, provided that digitization is not viewed as a solution in and of itself. Before any system migrates its data from paper to digital, there needs to be a clear understanding of the following: Digital records on their own will hold no inherent value to the system. Unless implementation is such that digital data could be leveraged in a swifter, more reliable and highly secure workflow, all that would be accomplished is transporting information from a filing cabinet into a server file system.

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Important questions arise as to information's accessibility, readability and ability to enable caregivers to find a piece of potentially critical data buried deep inside the system. Any record that cannot be directly found and leveraged—parsed, searched, analyzed and visualized—amounts to nothing more than lost information.

Data leveraging, therefore, is key. Without it, grappling with digital records can be more unwieldy than scurrying about for paper-based, chart information. Leveraging data is only possible through constant innovation in the health technology market—specifically, innovation by third-party developers who can respond with agility to the needs of care providers. Innovation, in turn, is possible only in an open health technology realm.

EHR vendors that do not allow application programming interface (API) access to third-party developers are stifling innovation in the very industry in which they operate. Essentially, digitization of patient data represents a new language, a new medium of interaction among healthcare players. If open communication in this language is blocked or hampered, the result is a lack of true interoperability and the injection of chaos into freshly digitized workflows.

In addition, a digital health record system must not demonstrate any disadvantages over its paper-based predecessor. A paper record can be located, perhaps slowly, and it can be read, albeit laboriously. Bottom line is that it can be accessed and searched. Paper data are leveraged neither efficiently nor reliably, as they hinge upon human fallibility; however, it could, when all is said and done, actually be leveraged. Digital data must not fall short of this key requirement and should be able to meet it with far greater speed and reliability, leading directly and demonstrably to improved clinical outcomes.

Once a paper record has been scanned and digitized, it will exist alongside structured records, as well as free text information within an EHR system. In essence, digitized paper data will be recorded alongside native digital data that was fed directly into a system. But to a doctor and clinical staff—and certainly to a patient under their care—none of this should matter.

Patient information, regardless of whether it was entered into a system as structured data, typed in as free text notes or scanned from a paper file, should all be treated collectively as “the patient chart” and be equally accessible and searchable. Anything short of that amounts to regression, not progression. Clinical decisions by doctors rely on dependable and readily available quality data. There is no getting around this axiomatic—yet curiously often forgotten—medical truism.

Migration made by a given set of patient information from paper to digital is not necessarily the end of the journey. Frequently, a medical facility opts to migrate its patient charts from one EHR platform to another. Alternatively, a hospital or clinic can elect to keep chunks of current data in one EHR platform and sign with another EHR vendor to handle remaining or future digital records.

Whatever the case may be, an end user—a care provider—should expect a transparent, unhindered experience when treating a patient or prepping for an encounter.

Regardless of the source, all patient data should be equally available and leverageable by a care staff. This, of course, rather than being the rule is often times merely an unfortunate exception. Such an EHR-agnostic workflow is only feasible with true interoperability and again, any EHR platform not facilitating (and insisting upon) an open health technology apparatus is only moving the industry farther from this goal.

If the ability to leverage data—more so than the format of the records—is what makes a difference between advancement and hindrance, it is necessary to concede that it is the context of the information, not the content that is of premium importance. Content, after all, is passive. Context is what imbues content with meaning. A doctor operates and makes critical decisions in a situationally aware framework.

That is to say, clinical decisions in order to be effective need to consider each datum in the context of the entirety of existing patient information. In addition, the specifics of an in-progress patient encounter need to be taken into account, as do the latest guidelines pertinent to conditions at hand. Any digital EHR system must enable context-sensitive leveraging of all these factors.

Such innovation is, as stressed above, the bailiwick of third-party developers, and it is their partnership with the EHR vendors that will ultimately set healthcare to rights. The rush to digitize without an equally energetic push for an open health technology apparatus fostering innovation and interoperability has reduced a potential boon into an existing boondoggle.

This observation is in no way an indictment of patient chart digitization but until and unless digitized data are allowed to be harnessed with appropriate sophistication, any endorsement of the process would ring hollow.

¹ Tahir D. "EHR Debacle Leads to Paper-based Care for Coast Guard Servicemembers." Politico.com. Apr. 25, 2016.

² Zieger A. "NYC Hospitals Face Massive Problems With Epic Install." hospitalemandehr.com. Aug. 24, 2015.

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