Electronic Health Records and the Archival Question: Shared Responsibility as a Panacea

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Introduction

- Literature on the benefits of Electronic Health Records (EHR) across the health sector abounds.

- EHRs are fast becoming ubiquitous across the health sector worldwide.

- Ironically, there seems to be a dearth of commensurate discourse on the archival question around EHRs.

The problem

- As all the hype about EHRs revolutionizing healthcare grows, there is not a commensurate discourse on the archival question.

- As EHRs are being hailed and hyped, an archival dilemma of such systems is looming.

- EHRs are being poorly archived due to technical and financial challenges characterizing archival institutions, especially national/government archives.

Objectives of the study

The study was guided by the following objectives:

- To unpack the archival challenges that are presented by EHRs; and
- To propose the distributed custody approach for the preservation of EHRs.

Central argument

- Given the complexity of EHRs in terms of their management, should archivists insist on taking custody of EHRs?

- Some scholars are already acknowledging that EHRs are currently residing with healthcare providers, not with archival institutions, further demonstrating the need for a genuine debate about EHRs preservation and the custody question [1]

Why preserve EHRs?

- Preservation of patient histories
- Preserves the memory of services offered by healthcare facilities
- Supports service delivery
- Advancement of medical research
- Legal requirements
- Support evidence-based decisions

The archival challenge of EHRs preservation

1. The complexity of EHRs and their users

- Multiple users (nurses, doctors, laboratory, pharmacists, etc). In some cases, patients may also add their health data to EHRs, however, on condition that this data is validated by physicians.

- Multiple vendors/systems, e.g GP, radiology, maternity, etc

The archival challenge of EHRs Preservation

- In light of the afore-mentioned challenge, one can further ask:

  should the preservation of EHRs be about extracting individual records from systems that generated them and preserve them separately or it should entail preserving the entire system?

The archival challenge of EHRs preservation

2. The life cycle of EHRs

- EHRs do not have a clear life cycle, making them potentially ever active.
- New data/information is always added to EHRs throughout the life of a patient.
- Furthermore, active and in-active EHRs are resident in the same EHR system.

The archival challenge of EHRs preservation

3. Technical considerations

- EHRs systems operate on different platforms, running on different technical standards, e.g content standards such as HL7, ISO TC 215 standards etc.

- EHRs platforms need constent updating, upgrading and integration for health records to remain accessible and usable over long periods of time.

The archival challenge of EHRs preservation

- Some EHRs platforms operate on proprietory software, thereby locking their upgrades and updates away from third parties.

- EHRs themselves are generated in ever-changing formats.

The archival challenge of EHRs preservation

4. Blurred difference between records and data

- The difference between a record and data is being blurred as records are increasingly being viewed as data.
- In the era of AI, big data and analytics, EHRs have become sources of data. The more the data, the better the outcomes.
- So, how is data separated from records that should be preserved when such data and records exist in the same EHRs system?

The archival challenge of EHRs preservation

5. Limited collaboration between archivists, health IT vendors and healthcare facilities

- The bulk, if not all the health records—active or inactive (archival), generated by EHRs is under the control of IT staff at healthcare facilities and vendors, thereby making them "archivists by default"
- However, there is limited dialogue between archivists and such technical personnel who are in real control of health records.

Proposed shared responsibility model

- Propounded by Ham in 1981, but not specifically for EHRs.

- In this approach, archivists losen up on their custodial role over EHRs, allowing healthcare facilities and vendors to retain and preserve EHRs for as long as it is legally and archivally required.

- Archivists focus on drafting and overseeing policies to ensure that EHRs meet the requirements of relevant laws, as well as archival functions, including long term preservation, accessibility, research and historical values.

Proposed shared responsibility model

- Healthcare facilities and vendors will assume permanent custodianship of EHRs, making it easy for their contents to remain accessible.
- This collaborative effort will result in mutual benefits whereby archivists, one hand, benefit from the technical infrastructure of healthcare facilities and vendors.
- Healthcare facilities, on the other hand, will enjoy the advantage of retaining and using the healthdata in their EHRs system for as long as it is necessary.

Proposed shared responsibility model

- This should be seen as a collaborative effort that requires a high degree of consensus between archivists, health IT vendors and healthcare facilities.

- It will place new demands on archivists, health IT vendors and healthcare facilities.

- Archivists need to develop robust archival policies and compliance mechanisms for EHRs to meet the legal and archival requirements that are resident in the creators' systems, whilst vendors and healthcare facilities will witness expanded roles of being "archivists by default", having to actively embed new archival policies and laws.

References

[1] W. Bartschat et al., “The legal process and electronic health records," *Journal of AHIMA*, vol. 76, pp. 96A-D, 2005.