Poster Proposal: Access Patterns to a Website on Healthcare IT Failure

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Abstract

Organizational and human factors issues associated with healthcare IT have led to project difficulties and failures. Detailed case accounts might improve knowledge sharing between healthcare organizations on lessons learned and best implementation practices. We conducted a study of access patterns to a website created by our first author that explicitly addresses the issue of healthcare IT failure via highly detailed case accounts in an ‘anonymized’ format. We found that our website is one of few relevant sites that is retrieved via major search engine queries on “healthcare IT failure” or related concepts, and we hypothesize that “hits” on our website may reflect a significant portion of the demand for information on this issue. We then studied the demographics and queries used by viewers of our website via a public website-tracking utility (no personally-identifiable information was obtained). We found that demand for information on healthcare IT difficulty and failure via the Web is ongoing by searchers of a variety of demographics, and we believe the demand is largely unmet. The medical informatics community can contribute to filling this gap.

Research questions

To study knowledge sharing on Healthcare IT difficulty, we looked at access to a website “Sociotechnologic Issues in Clinical Computing: Common Examples of Healthcare IT Failure” at http://home.aol.com/medinformaticsmd/failurecases.htm created by our first author via an informal collaboration of AMIA clinical information systems working group (cis-wg) members during 1998-2001, modeled loosely after the cases summarized in Ch. 1 of “Organizational Aspects of Health Informatics: Managing Technological Change” by Lorenzi and Riley. We evaluated the following two research questions: 1) what case-level information about healthcare IT project difficulty and failure is available via the Web, and 2) who is seeking this information.

Methods

We first conducted a detailed online search utilizing various search phrases expressing the concept “healthcare IT failure” via three major search engines (Google, Yahoo, and MSN). We tracked views of our website (via public tracking site Extreme Tracking, http://extremetracking.com) from Sep 27th 2005 to Mar 1st 2006. We then examined the access logs for viewer IP and referrer (e.g., search engine query or other website link), and utilized web IP lookup services (e.g., www.arin.net and www.apnic.net) to identify viewer demographics including country and organization type, where available.

Results

We found that relevant websites that directly address this issue through real-world case examples are rare, and that our website seems nearly unique in this regard. We also found that our website is very highly ranked (in top five to ten hits) by these engines on searches for “healthcare IT failure” or other expressions with the same or similar meaning, for example “clinical computing difficulty.” We hypothesize that “hits” on our website may reflect a significant portion of the worldwide demand for information on this issue, at least in countries with Web access.

We studied access patterns to our website of health IT difficulty cases. Number of unique hits, N=2316. The most common countries of origin where obtainable were the U.S. 1816, Australia 91, U.K. 70, Philippines 64, Canada 40, Malaysia 22 and Netherlands 19. The website visitor breakdown was as follows: ISP (private individual in private capacity) 1368, university or other educational institution 294, healthcare organization 170, healthcare-related industry 38, governmental entity 56, other organization 268, unknown 122. The query expressions, where known, were partitioned into a number of categories. Breakdown: healthcare IT failure or similar concept (e.g., clinical computing difficulty) 81, IT failure or similar concept 212, healthcare IT or similar 215, project management-related 52, queries about any of healthcare, IT or failure 423, and unrelated (e.g., a query that is an incidental lexical match on some random phrase in our website) 138.

Conclusion

Web-based, detailed information on healthcare and other IT project difficulty that can be used as “lessons learned” by others in their own projects is uncommon. There is an ongoing demand for this type of information from searchers of varied demographics, as evidenced by searches on this topic and “hits” on one of the few websites that specifically addresses the issue. With the increasing push for EMR implementation at national levels, knowledge sharing via the Web on project difficulties might be helpful to those involved in implementation. At present such material is uncommon. We believe filling this gap is an area in which medical informatics specialists can contribute, and that doing so would be helpful to the healthcare IT community.