French Infobutton: an academic and… business perspective

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Abstract

Infobuttons are context-specific links between clinical information systems and other online information resources. The objective of this study is to describe a French Infobutton, which will be sold in the French-speaking Health Information market.

Introduction

Infobuttons are intended to anticipate and address clinicians' information needs[1]. After being introduced by Cimino *et al.*[1] they have been integrated in several public health information systems and they are beginning to appear in commercial systems.

The objective of this study is to describe a French Infobutton (FIB) designed and developed by the Rouen University Hospital (RUH).

Materials and Methods

The original idea of the FIB was to customize InfoButton to the French environment. The RUH Information System was chosen to design, develop and test the FIB based on two types of contextual knowledge: (1) the end-user profile (health professional, student and patient) and (2) the medical context, currently represented by concepts from two medical terminologies, *viz.* ICD 10 and CCAM, the French equivalent to US CPT used to code health procedures. The FIB appears within the electronic patient record (EPR) on different coding screens for Diagnosis-Related Groups, and mainly on the summarized electronic patient record, which gives access to two screens displaying the exhaustive diagnoses and procedures in the medical history in the RUH via ICD10 codes and CCAM titles and codes.

In this medical context, the FIB allows to search the main institutional websites to access high-quality documents available in French on the Internet. The CISMeF team selected fifty websites produced by high-quality Internet publishers, such as governments from French-speaking countries (France, Switzerland, Belgium, Canada, and many African countries), national health agencies, medical societies and medical schools.

These documents are filtered according to the end-user's profile, which is known from the Health Information System login procedures: clinical guidelines, and more generally evidence-based documents will be displayed for health professionals, teaching documents for students, and consumer health information for patients. Nonetheless, each user can access documents intended for the two other profiles via a contextual button (e.g. a physician may play the role of "infoprovider" to his/her patient and to provide adequate documents).

Health documents on the Internet may be accessed through their description with the MeSH thesaurus: MEDLINE bibliographic database, French CISMeF, Australian Healthinsite & UK Intute catalogs, Orphanet… Therefore, it is necessary to map ICD10 and CCAM codes to MeSH terms. We used the UMLS to obtain a first version of the mapping between ICD10 and MeSH, which was manually reviewed by a physician (PM). Because the CCAM is not included in the UMLS (yet), it was necessary to manually map the 7,200 CCAM codes to MeSH terms. This was done through a cooperation between a physician (PM) and a medical librarian (BT), during a four man-month period. Via the bilingual MeSH in English and French, it is then possible to search as precisely as possible these 50 Web sites, including the CISMeF catalog which give access to documents according to different profiles. For each of these 50 Web sites, a specific query was necessary to implement by the CISMeF four medical librarians.

Results & Discussion

The InfoButton is commercialized by the IS@S private company (AD). Thanks to the Allegre Law (voted in France in 1999), the 9 co-authors of this French Infobutton will receive 50% of the money that the IS@S Company will retrocede to the Rouen University. These 9 co-authors are 2 medical informaticians, 4 medical librarians, 1 engineer and 2 PhD students from the CISMeF team. The FIB pricing was estimated at 5-10 € per hospital bed. A FIB version for health professional private offices is under development.

In February 2008, this InfoButton is already in demonstration in a commercial portal devoted to physicians in private offices and private small hospitals (n<100 beds). Several Hospitals Information Systems vendors have also recently visited Rouen Hospital to test FIB in a real environment.

References

[1] Cimino JJ, Elhanan G, Zeng Q. Supporting Infobuttons with Terminological Knowledge. *JAMIA*. 1997;4 (Suppl):528-532.

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