VUMeF: Extending the French Involvement in the UMLS metathesaurus

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The great variety of classifications and thesauri currently used in the medical field highlights the need for links between controlled vocabularies. The Unified Medical Language System plays this unifying role, but the terminologies it includes are mostly in the English language. The VUMeF project (French Unified Medical Vocabulary) aims to extend and strengthen the coverage of French terms linked to the UMLS Metathesaurus.

OBJECTIVES

VUMeF will enable: (i) optimized access to information within textual parts of electronic medical records (coding help); (ii) enhancement of information retrieval from biomedical literature and from health resources on the web (controlled indexing); and (iii) optimization of controlled drug prescription: linking patient records to prescriptions.

The consortium involves three kinds of partners corresponding to the three main parts of the project: the active French research teams in medical terminology, as well as Swiss and Canadian teams; teams specialized in natural language processing, either specifically medical or not; private software companies, both specialized in health informatics and in Web search. Several partners, as university hospitals, also represent users of the resources, tools, methods and technologies developed by the project. Six VUMeF partners are developing at the same time a French Specialist Lexicon within project UMLF.

Project plans cover the following blocks.

A French-language extension to the UMLS Metathesaurus

- Improving the French translation of the MeSH thesaurus; providing mixed-case accented forms, adding more synonyms and acronyms, translating definitions;

- Contributing to the translation of SNOMED 3.5;

- Mapping other French-language terminologies to the Metathesaurus: the new French national Common Catalog of Medical Acts (CCAM) is planned; others are considered (e.g., ADICAP for pathology).

Tools for managing French-language terms

- Providing tools for mapping French expressions into controlled vocabularies, both by exploiting explicit relations between terms and concepts in the (extended) UMLS and by using language-based matching and linking;

- Providing tools and methods to help collect candidate expressions in texts for enriching current vocabularies (synonyms and other related terms), integrating, validating and maintaining terms.

Demonstration of the use of these resources in applied tasks (by private companies)

- Controlled drug prescription (Vidal, the French company that publishes the official drug monographs - coordinator of the project);

- Computer-assisted coding for electronic patient records (ID9 Prima);

- Indexing medical Web sites (Synomia).

CONCLUSION

The applications of a French unified medical vocabulary are various and numerous, and all the existing software using medical vocabulary could benefit from this work. VUMeF applied a grant from the French Ministry of Research (National Network of Health Technologies).